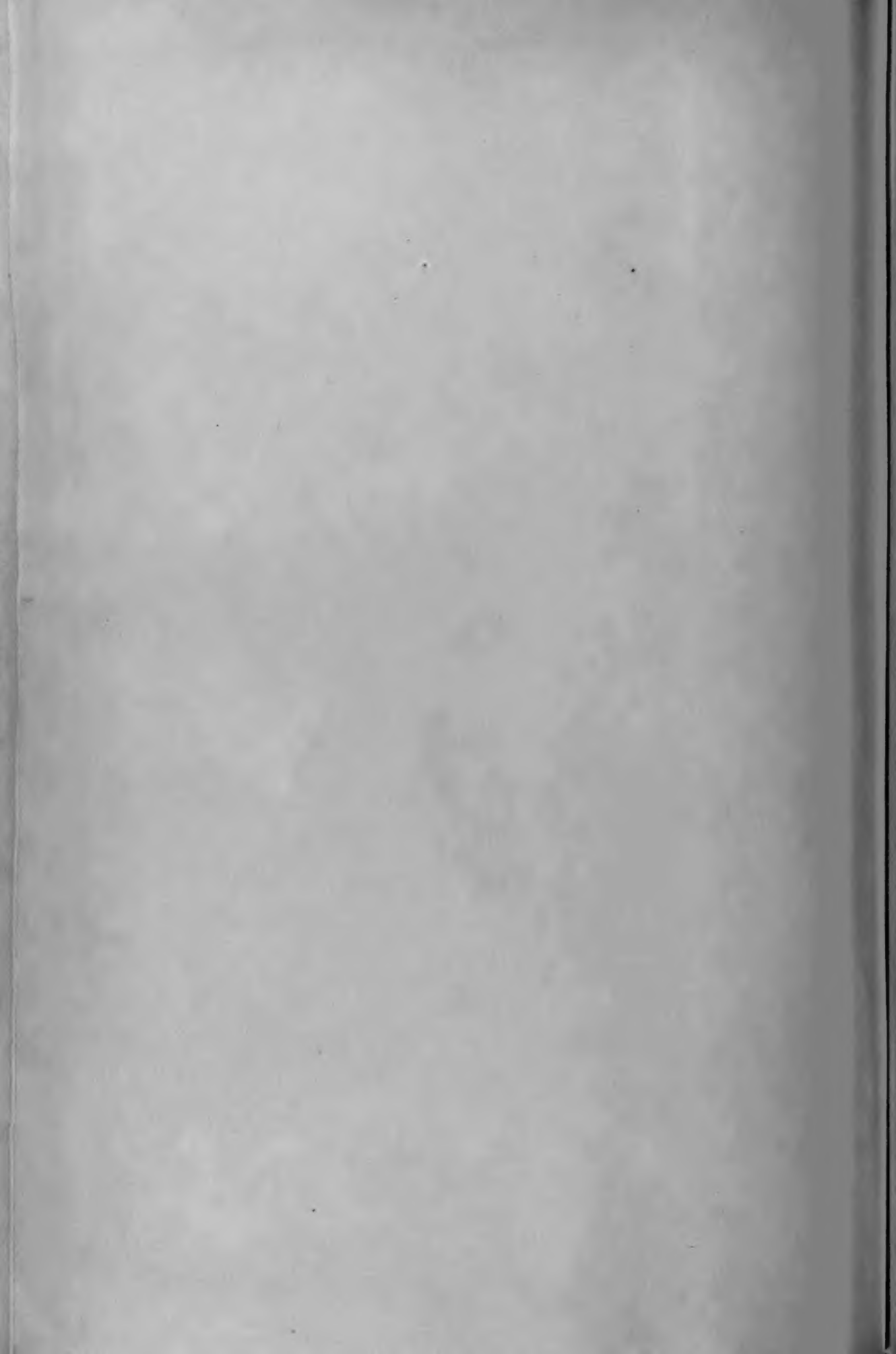


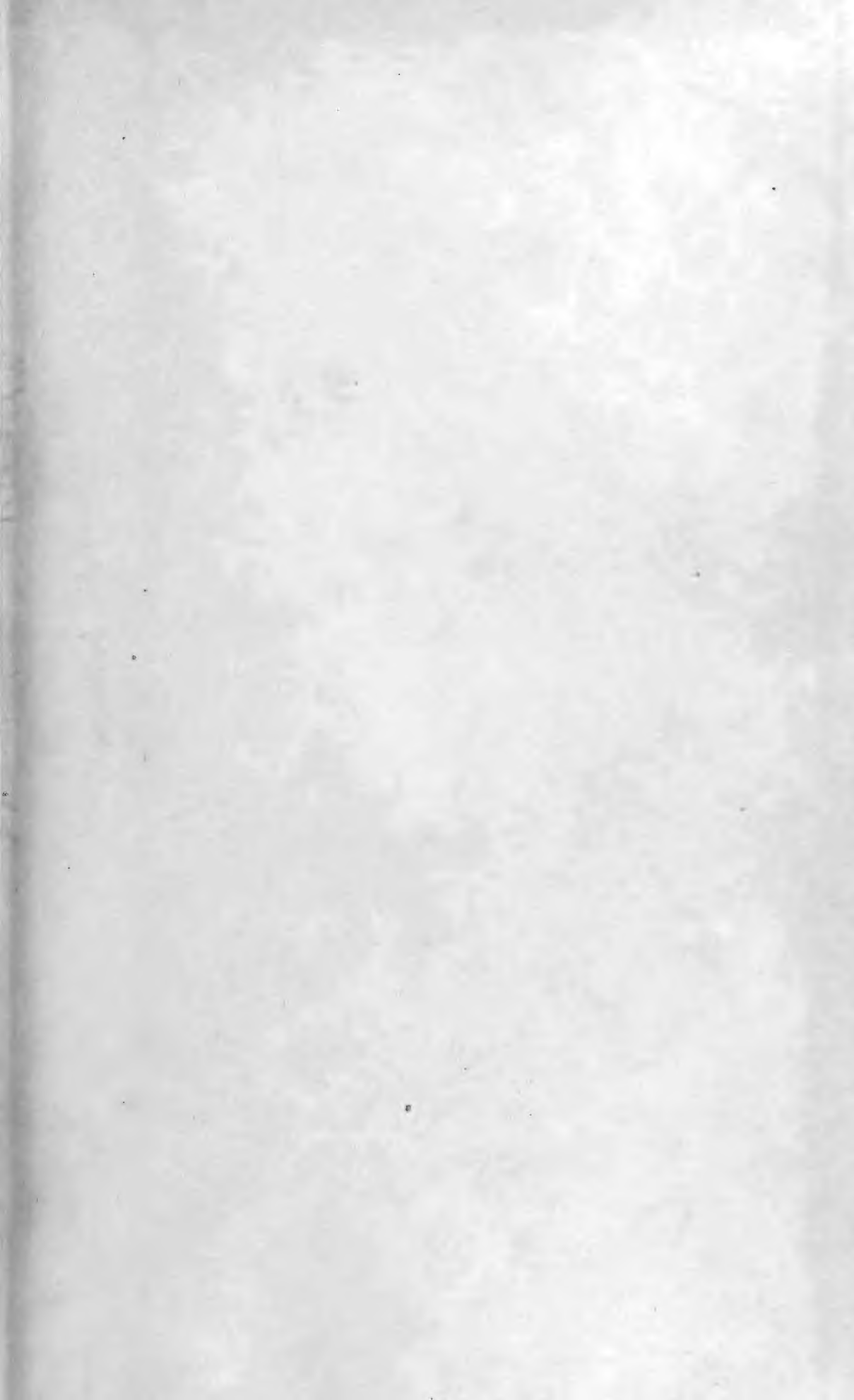
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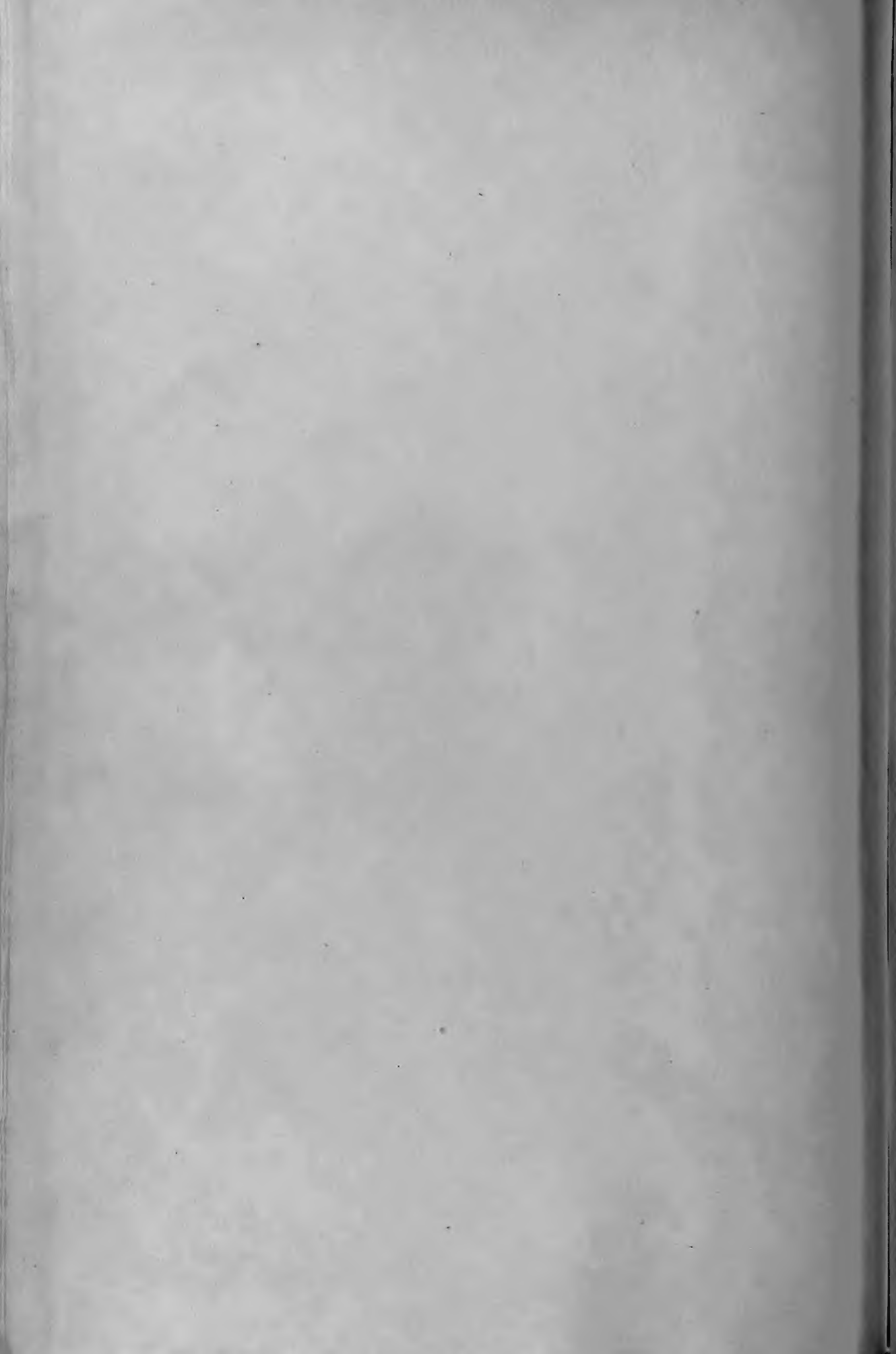
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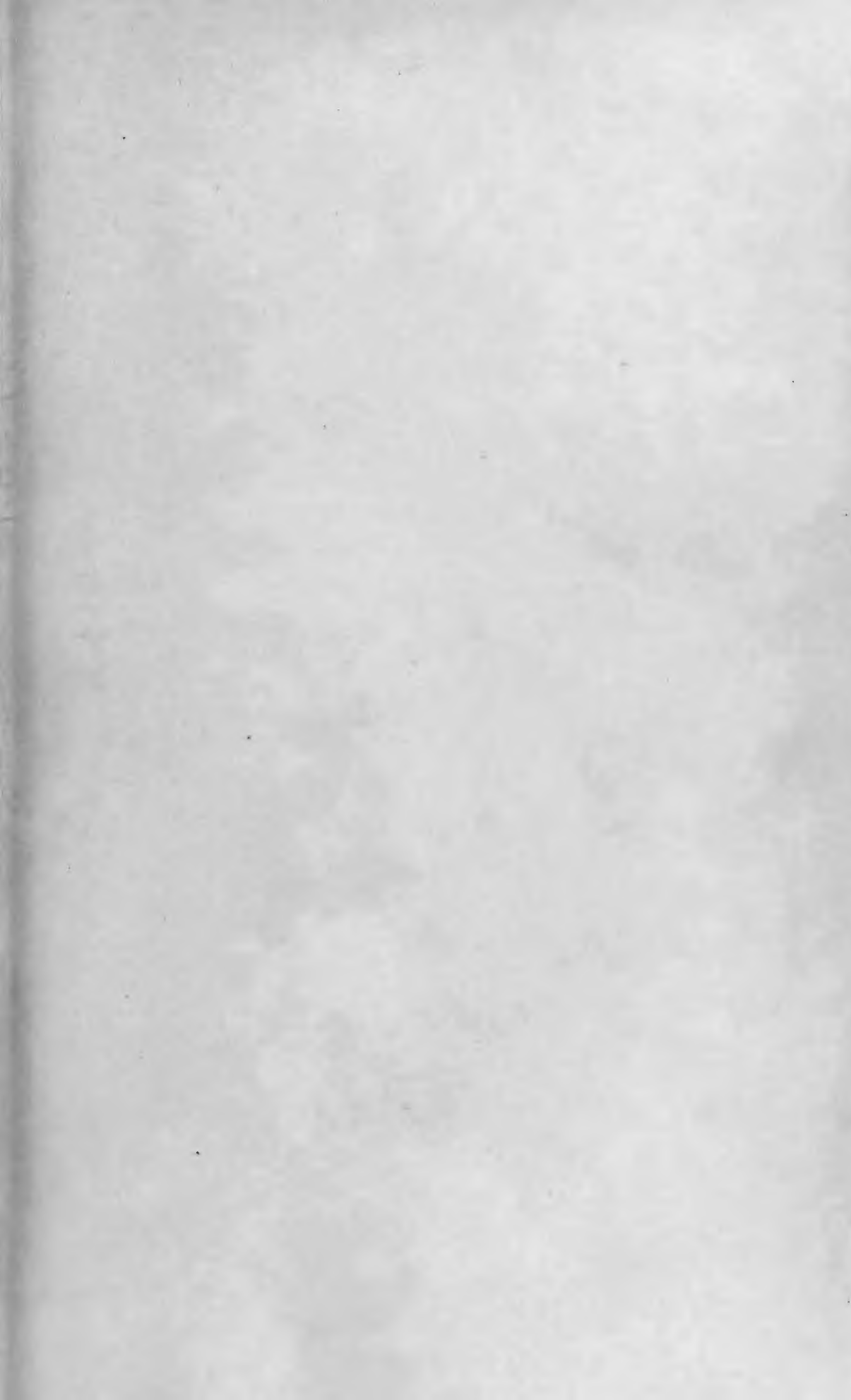


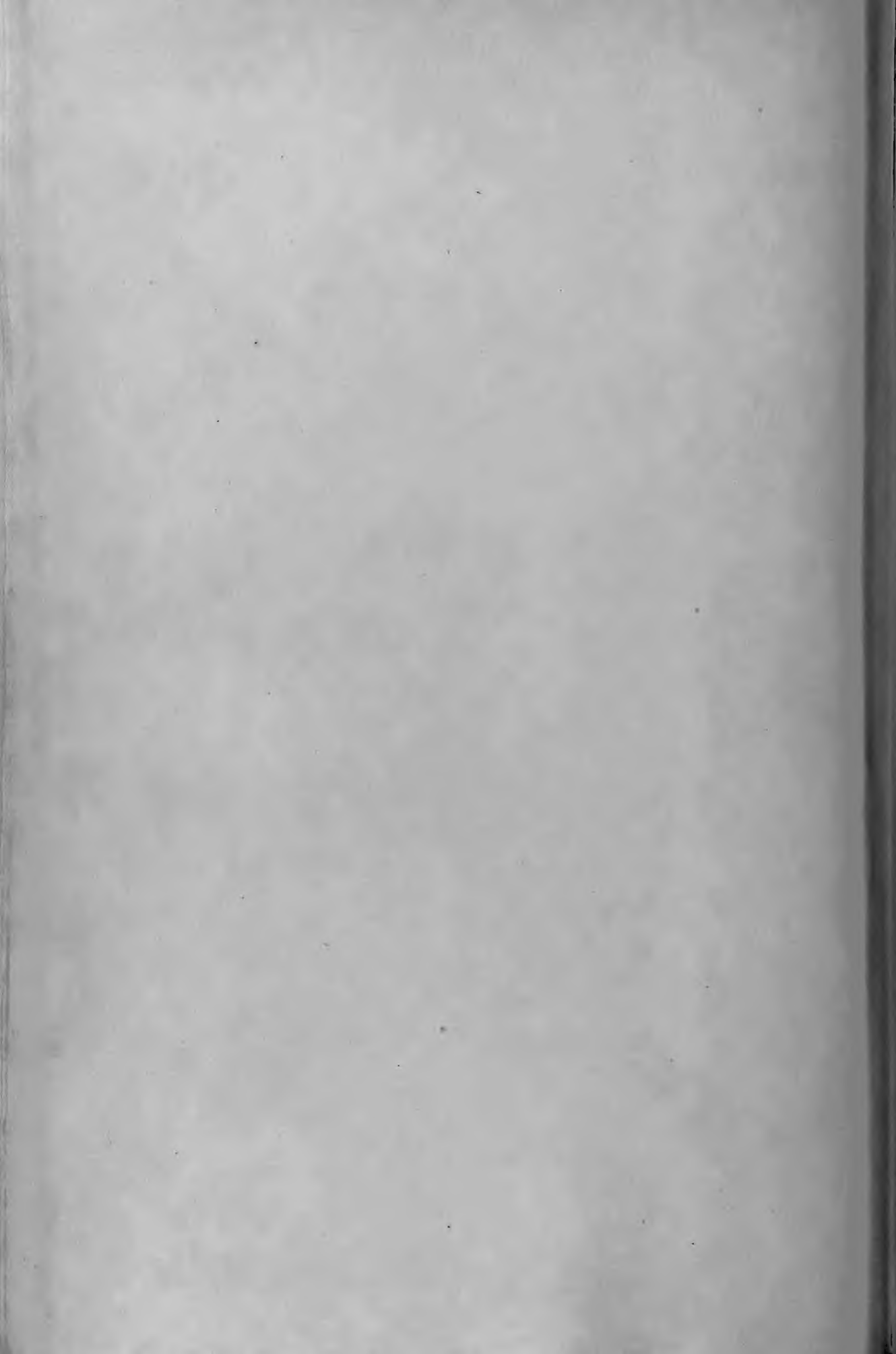


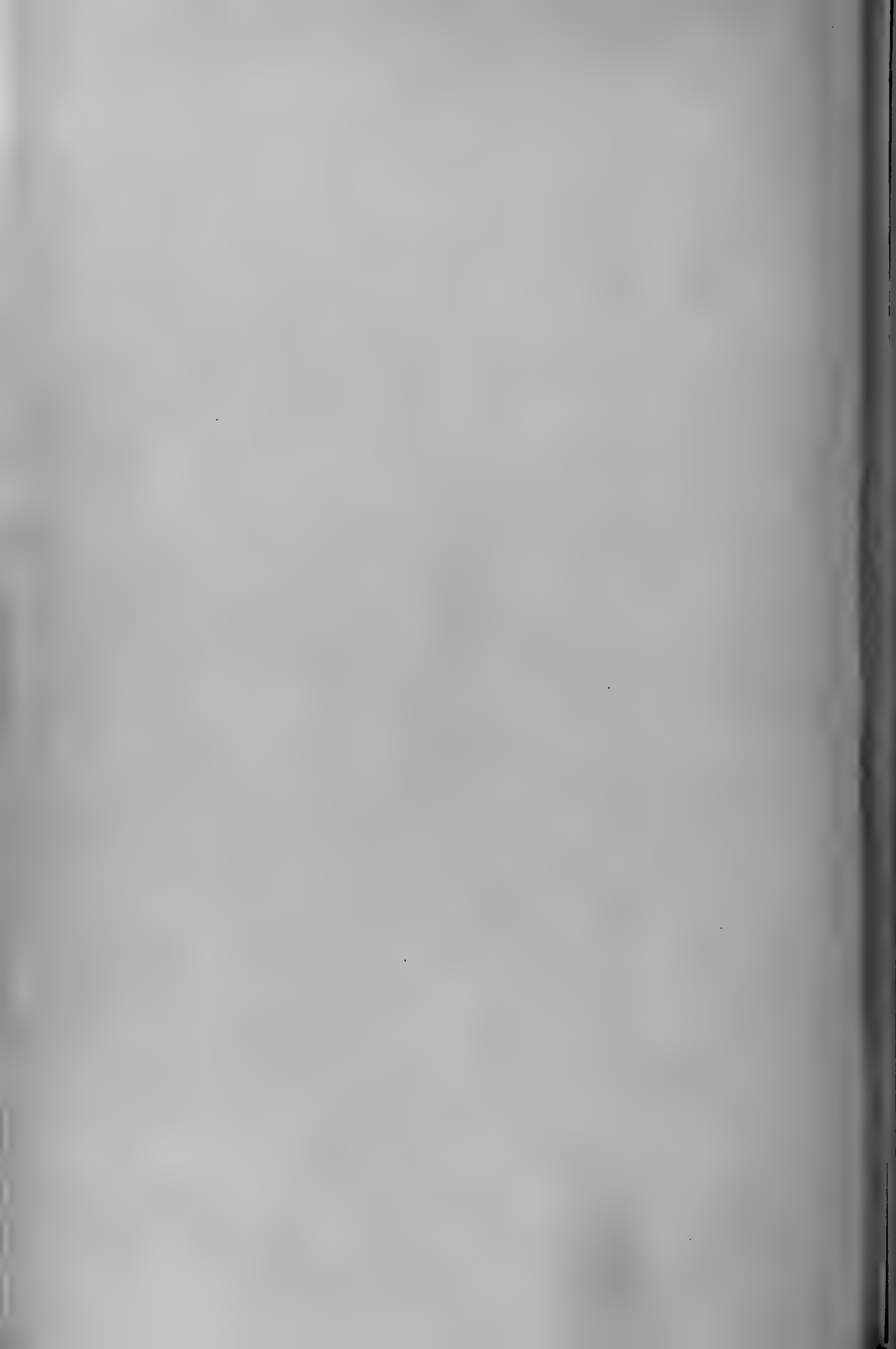












BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

AN ILLUSTRATED MAGAZINE DEVOTED
CHIEFLY TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY M.B.E. F.Z.S. M.B.O.U.

ASSISTED BY

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AND

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Volume XX

JUNE 1926 — MAY 1927



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326 HIGH HOLBORN LONDON



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BRITISH BIRDS

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DEVOTED CHIEFLY TO THE BIRDS
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JUNE 1.
1926.

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No. 1.



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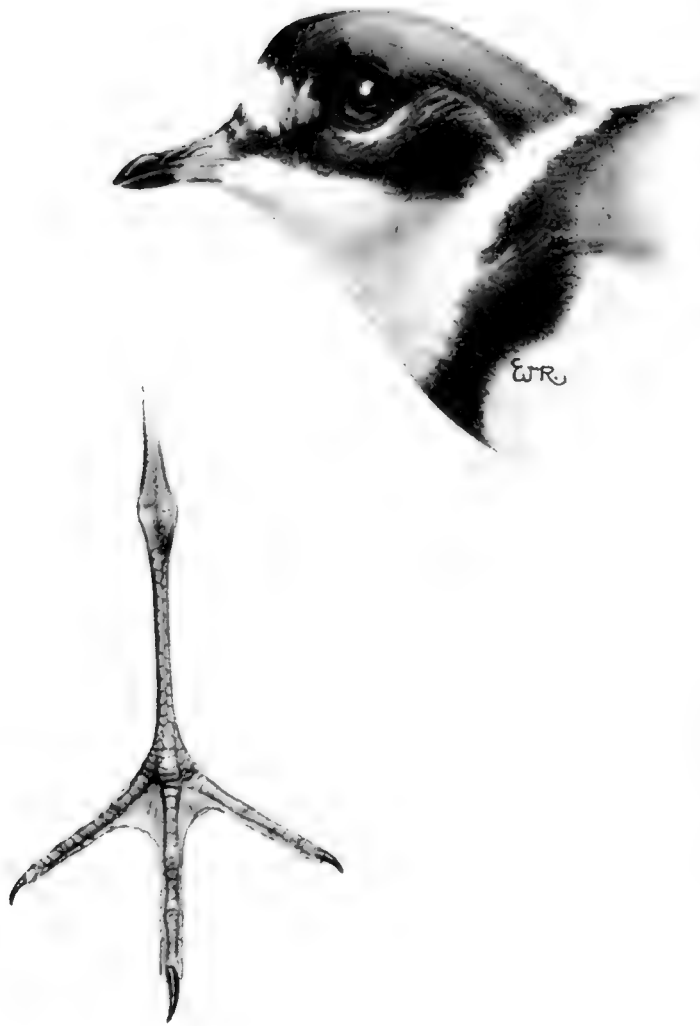
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SEMI-PALMATED RINGED PLOVER.

Adult, May, nat. size.

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NOTES ON ALBERTA WADERS INCLUDED IN THE BRITISH LIST.

BY

WILLIAM ROWAN, M.SC., F.Z.S., M.B.O.U.

PART I.

SEMI-PALMATED AND KILLDEER PLOVERS.

(Plates I and 2.)

INTRODUCTORY.

THE following notes do not set out to be comprehensive. They represent little more than odd observations collected here and there as opportunity offered. I am indebted to my friend, Mr. William MacDonald of the University of Alberta, who has spent his life in the Province and knows its birds intimately, for many valuable and unpublished notes on the bird life of Alberta and the North-West Territories, some of which are incorporated in these articles.

Generally speaking, very little is known of the birds of Alberta. New species are continually being added to those already known to occur, and migration routes through the Province are only slowly becoming better known than they were. This is mainly due to a dearth of observers. Forests, prairies, mountains, semi-deserts and various intermediate zones afford a most diversified topography, while the size of the Province is so great that it must be many years yet before our knowledge becomes adequate to justify even elementary generalizations.

On my second day in Edmonton, some years back now, I was recommended by the local taxidermists, Messrs. Wolfe and Hine, both bird enthusiasts, to try a spit on a lake some fifty miles out of the city as a centre for collecting and observation. The first opportunity for a visit was accordingly taken. The spot proved so extraordinarily fruitful that I have worked but little elsewhere, and most of the observations here recorded were made there.

The spit reminded me at first sight strongly of Blakeney Point, Norfolk, although it is but two miles in length and the briny atmosphere and the shingle are of course wanting. There is a series of bushes (willows), much used by migrating Passeres, extensive mud-flats (Fig. 1) and a terminal sandy point (Fig. 2). But its waders made anything else that I have



FIG. 1. PART OF THE POINT MUD-FLATS.
(*Photographed by W. Rowan.*)

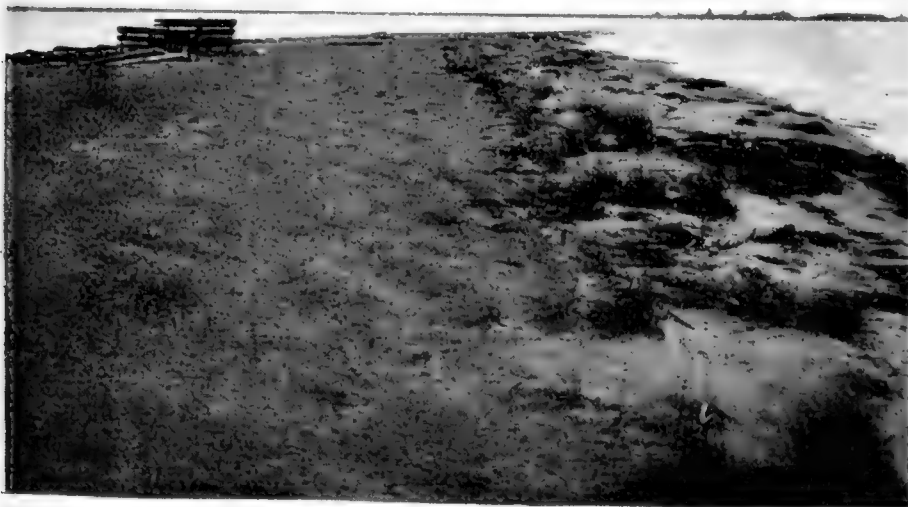


FIG. 2. THE TERMINAL SANDSPIT.
(*Photographed by W. Rowan.*)

ever seen sink into oblivion. There were literally thousands. The most striking thing on that first visit was the abundance of many species that one might see but once in a life-time on the British coasts, or perhaps never at all, and with which one had become familiar only through literature and collections. To see hordes of Sanderlings thoroughly at home on a fresh water mud-flat was perhaps equally remarkable. But one was almost completely overwhelmed by the vast concourse of water-fowl. As far as one could see over the lake with binoculars (X8) were Ducks, in myriads. Here and there were rafts of Geese, including Canadas, Hutchins's, Lesser and Ross's Snows and White-fronteds, while once in a while a large flock of Swans would cross the Point in a ragged string, or an immaculate V of Cranes would pass sedately southward. Numerous Pelicans lent a bizarre touch to the whole scene. A single flock of Bonaparte Gulls numbered four thousand, close packed, floating a short distance out from shore. Every yard of mud seemed to be occupied with waders. Harriers and Short-eared Owls were never out of sight. It was a remarkable experience, but even so, so far as the waders were concerned, not to be compared with conditions in the spring, when we have collected no less than thirty-one species in a few days on the terminal mile of mud. Altogether, we have thirty-eight species and sub-species on the Point list.

Such, briefly, is the place in which most of these observations have been made. We have kept a steady, unbroken watch on the Point through the main migrations of four springs and two long autumns and have put in shorter stays in other years. Hitherto we have been unable to be in camp for the latter half of June and the whole of July, although odd visits have been made during those periods. I am greatly indebted to Mr. C. G. Harrold of Winnipeg for spending many weeks on the ground during which I was not able to be there in person and keeping meticulous records which have helped to link up the notes of one year with those of another. (I also have to thank him for useful comment on, and criticism of, these notes.) From the combined lists we have gathered some facts of exceptional interest with regard to the migration of waders in general. These will be summarized in the last instalment of the notes.

While my purpose is to deal mainly with those species occurring in England, I propose to include remarks on a few others, either because they are great wanderers and may sooner or later be incorporated in the British list, or because they offer points of special interest.

THE PLOVERS.

Of the six Plovers occurring on the Point, the Piping Plover (*C. melodus*) is casual (Alberta is not included in its range in the *A.O.U. Check-List*), while our sole specimen of the Asiatic Golden Plover (*C. d. fulvus*) is the only record for the whole of inland America. The other four, all on the British list, are abundant as migrants, the Killdeer (*C. vociferus*) being a breeder as well as a migrant.

Charadrius (A.O.U. Check-List, *Ægialitis*)* *semipalmatus*,
SEMI-PALMATED RINGED PLOVER.

The Semi-palmated Plover, as it is known on this side, is so like the Ringed in its general ways and habits on migration that there is little to be said about it. It has the same nervous ways and diffident manners; will run long distances before taking flight if followed; seldom occurs in large flocks; individuals tend to scatter as soon as the flock alights; odd birds associate freely with flocks of other species; flight straight and swift; call-note a soft melodious

~
tu-whce,*

sometimes appearing to be three-syllabled.

On the spring migration the birds usually arrive at the close of the first week of May. They soon become numerous, but by the 23rd and 24th the last has gone. We have but one record—a single bird—in the last week of May and none in June. In the fall the adults make their appearance at the beginning of August. By the end of the first week they are very plentiful. Young begin to arrive about the middle of the month or a little later, when for a time adults and young mingle together. By the end of the month the adults have all disappeared, leaving the juveniles in considerable numbers till the middle of September, when they also depart, though stragglers may remain till the end of the month. We have

*As the generic treatment in vogue on this continent may prove of interest to British readers not familiar with it, the *A.O.U. Check-List* name will be inserted in brackets after the one employed herein. I have adopted the *Practical Handbook* nomenclature throughout, except that I have treated the two forms of *Ereunetes* as full species—see Part IV. Differences in the popular names will be indicated in like manner.

†For an account of the method of recording bird-calls used throughout these notes, see Rowan, *Brit. Birds*, Vol. XVIII., pp. 14-18, "A Practical Method of Recording Bird-calls."

no October records for the species. We have never seen or taken adults in winter plumage. Quite a considerable proportion of young have an incomplete breast-band.

Charadrius (A.O.U. Check-List, *Oxyechus*) *vociferus*,

KILLDEER PLOVER.

The Killdeer is our only breeding Plover. It is the first wader to come north in the spring and the last to go south in the fall. It may arrive as early as the middle of March and stay till the middle of November. These are remarkable dates for a shore-bird in this country, since the lakes remain frozen as a rule till the end of April and exceptionally right into May. Even the rivers may remain solid till the middle of April. The latest Killdeers have been noted in the fall, weeks after the freeze-up. The earliest nesting record we have is of a set of eggs taken by Macdonald on May 1st, 1922, about half incubated. This is exceptional, but laying is probably general in normal years early in May. We have never noticed anything that could be called a distinct display.

The Killdeer in most of its habits is also reminiscent of the Ringed Plover. It seldom occurs in large flocks, and, when it does, the flock is invariably of the scattered variety. The bird is a great runner and exhibits all the nervous traits of the Ringed Plover. As we are in its breeding range, which extends casually as far north as Great Slave Lake, we have no striking migration phenomena, although large numbers, evidently on the move, are generally to be seen on the lakes in the middle of July. The birds arrive in small parties and scatter on arrival. They are largely paired by the middle of April.

In the field the Killdeer can be mistaken for no other bird. Its double breast-band, its large tail and red rump, its typical Ploverish ways, its incessant and characteristic calls, make it one of the most easily identified of all species.

The Killdeer chooses a great variety of sites for nesting. All the nests I have personally seen have been on rough pasture, and this, I think, may be considered the usual situation in this part of the world. But a great selection of sites, from the roofs of buildings to bare sandspits, is on record. No preference is shown for the vicinity of lakes, although nests naturally occur there frequently on account of the abundance of the species. The nest is merely a depression, typically grass lined, often in a hummock or in a clump of weeds (Fig. 3). The usual number of eggs is four.



KILDEER PLOVER.

Adults and nestling, June. Nestling approx. 2/3rds nat. size.

Copyright by W. Rowan.



It might be well, in passing, to comment on an American descriptive term that appears constantly in literature on this side, that I am sure must be misunderstood by the majority of British readers. I refer to the word "teeter." Since it quite adequately describes a call, that in one form or another is common to many shore birds, one would naturally suppose it to have some such significance. The context generally abets the delusion. As a matter of fact it refers to no call at all, but to the action of tipping up, Sandpiper fashion. I



FIG. 3. NEST AND EGGS OF KILLDEER PLOVER.

(*Photographed by W. Rowan.*)

discovered the meaning of the term by accident myself by erecting a see-saw in the garden for my youngsters, who presently began to talk about the "teeter-totter," the English for which is "see-saw." The Killdeer has a modified kind of "teeter," common when accompanied with young. The tail is raised in the air, not momentarily, but long enough to permit the bird to complete one of its longer calls, when it returns to the horizontal. The wings are often drooped at the same time (Plate II.).

The Killdeer is probably the noisiest shore-bird in the country. It is not only indecently noisy, but excessively


demonstrative when running with young. I know of no bird (except possibly the Avocet) so persistent in the broken wing performance (Fig. 4), or capable of so many variations of it. It may range from the mere dropping of one wing, while running quite fast, to a complete flattening of the bird on the ground, tail and both wings spread out, to the accompaniment of many curious noises. Both sexes participate in this



FIG. 4. KILLDEER PLOVER FEIGNING INJURY.
(Photographed by Alex. G. Lawrence.)


exhibition, often simultaneously, so that there can be no mistake about the male's share.

The chief calls of the Killdeer appear to be the following :—

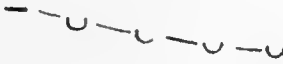

 " Kil-dee " or a slurred " dec-dec,"

loud, clear and ringing, is the common call-note. It is more usually used in flight, but also at times on the ground. A


curious variation is the duplication of the last syllable, which is then dropped instead of being raised, thus

— 
dee-ec-e.


This appears to indicate greater agitation. It seems to be an abbreviated form of a rapid call generally used when the bird has been flying round one in great excitement and is about to settle or in the actual act of settling and running swiftly over the ground :—

— 
dee-dee-dee-dee-dee.

This may be substituted in the same circumstances by a rapidly and frequently repeated


tit tit tit tit tit.

The only other call in constant use is softer, more melancholy and more typically Ploverish and sounds like


dee-e dee-e.

the last syllable, although raised, being much lower pitched than in the rather similar call-note. The significance of this call I have not been able to determine, but it is probably more frequent out of the breeding-season than it is in and generally uttered when the bird is on the ground.

The Killdeer seems to feed largely on insects, particularly during the breeding-season, many of them being noxious.

The following description of a downy chick recently out of the egg may be of interest, since no example was available to the authors of the *Practical Handbook* (see Plate II.).

Down on fore-head white divided centrally by buffish line running backwards from blackish patch at base of upper mandible ; crown greyish-buff irregularly streaked and speckled black-brown, completely encircled by irregular black line passing at sides above eye ; nuchal collar and tips of wings white ; black streak from base of upper mandible nearly to eye ; single black pectoral band extending to back of nuchal collar, but incomplete behind ; remaining upper parts

greyish-buff (yellowish-buff on wings) irregularly and finely marked and speckled black-brown ; black line along wing and from thigh to thigh round sides of rump, across base uropygial tuft and down middle of back ; uropygial tuft long, black, yellowish-buff underneath ; thighs yellowish-buff ; underparts white ; bill black ; eye black ; legs french-grey ; soles of feet yellowish.

ON SOME NEW BRITISH BIRDS.

BY

H. F. WITHERBY.

THE PETCHORA PIPIT.—*Anthus gustavi* Swinhoe.

ANTHUS GUSTAVI Swinhoe, Proc. Zool. Soc. London, p. 90 (1883—Amoy).

IN the *Scottish Naturalist*, 1925, pp. 141-2, Surgeon Rear-Admiral J. H. Stenhouse announces that on September 24th, 1925, at Fair Isle (Shetland), he obtained a Pipit, which proved to be a male example of the Petchora Pipit.

The Petchora Pipit, whose winter and summer plumages are alike, at first glance closely resembles the Red-throated Pipit (*Anthus cervinus*) in *winter* plumage. The rump is spotted as in that species and the rest of the upper-parts are similar though usually rather browner, especially on the crown and rump, and usually the feathers on the sides of the mantle have distinct pale buff or whitish edges, and these when present are distinctive. The under-parts are also similar, but the chin and throat are of a purer whitish-buff and the sides of the chin are not streaked or only very lightly. The dark streaks on the breast and flanks are prominent but, it may be remarked, not always so distinctly so as in the drawing in Dresser's *Birds of Europe* (Vol. III., plate 134).

The outer pair of tail-feathers are largely buffish-white, and the penultimate pair of tail-feathers have larger wedges of buffish-white on their inner webs than *A. cervinus*, but neither this character nor the others mentioned above are invariable.

The bill is larger than in the Red-throated Pipit; the tail is shorter; the fifth primary is shorter and often not emarginated at all, though sometimes very slightly; the long inner secondaries are usually shorter; on the other hand, the hind claw, like that of the Red-throated Pipit, is longer than the hind toe and slightly curved.

The Petchora Pipit is easily distinguished from the Tree-Pipit by its spotted rump, long hind claw and not clearly emarginated fifth primary, and from the Meadow-Pipit by its spotted rump and shorter fifth primary.

The measurements of twelve males of the Petchora Pipit, taken in the same way as those given for other Pipits in the *Practical Handbook*, are as follow:—♂ wing 78-86 mm., tail 50-56, tarsus 20.5-24.5, bill from skull 14-16, hind claw 9-12.5, slightly curved and longer than hind toe. ♀ wing 74-85. Primaries: first minute, less than half primary-

coverts, second to fourth longest and equal or one or other 1 mm. shorter, fifth 4-6 shorter, sixth 10-17 shorter; third and fourth emarginated outer webs and fifth sometimes very slightly so. Tip of long inner secondary usually reaching to tip of sixth or seventh primary but sometimes between fifth and sixth.

The Petchora Pipit was found breeding on the Petchora by Harvie-Brown and Seebohm during their well-known expedition in 1875. Dresser named the bird *Anthus seebohmi* (*Birds of Europe*, Vol. III., p. 295), not realizing that it had been described twelve years before by Swinhoe from specimens obtained in Amoy.

The bird's range extends in summer from the Petchora eastwards to Kamschatka and the Bering Straits and southwards to the Altai, and we have definite records of nesting in the Petchora, Yenesci and Kolyma valleys. In winter it migrates to China, the Philippine Islands, Borneo, Celebes and Molucca. It is stated, on quite unreliable evidence, to have once occurred in Galizia, but the Scottish specimen is the first authentic record of the bird's appearance west of the Petchora.

As the Red-throated and Petchora Pipits are sometimes so much alike it would be worth while re-examining specimens of the former.

THE PADDY-FIELD WARBLER.—*Acrocephalus agricola agricola* (Jerdon).

SYLVIA (ACROCEPHALUS) AGRICOLA Jerdon, Madras Journ. Lit. & Sc. XIII., No. 31, p. 131 (1845—Nellore, Madras).

Surgeon Rear-Admiral Stenhouse is also the discoverer of this second addition to the British List. He states (*Scot. Nat.*, 1925, p. 173) that a male example of this species was shot by Mr. George Stout in a field of turnips at Fair Isle on October 1st, 1925. Admiral Stenhouse had seen a bird, which he considers was the same, on September 26th, and thinks that it probably arrived that day. There was a little east wind during the previous night.

This species, well known to Indian ornithologists as the Paddy-field Warbler, is a winter visitor to India. It breeds in Tsaidam, the Altai, East and West Turkestan, Transcaspia, Astrakhan and the Kirghiz Steppes and the south and middle Urals. A specimen obtained in the middle of April at the mouth of the Danube points to a possible more western extension of its breeding range. It was once obtained on Heligo-

land on June 12th, 1864. This specimen, the sex of which is not stated, was described by Gätke (*Birds of Heligoland*, p. 308) as being much worn, and this may account for the very small wing, the measurement of which is given as only 52 mm.

The typical form is replaced in north-west India by *A. a. haringtoni*, a darker bird with a shorter second primary; in Assam and Lower Burma by *A. a. stevensi*, a similar but still darker race, and in China and the eastern Himalayas by *A. a. concinens*, much like the typical form in colour but with a shorter second primary as in *A. a. haringtoni* and *A. a. stevensi*.

Those birds which I have seen from Kashmir appear to me to be *A. a. concinens* and I have not been able to see a breeding specimen of *A. a. agricola* from Kashmir where it has been stated to breed.

The reported occurrence of *A. a. agricola* in Africa (*Ibis*, 1918, p. 644) has already been shown to have been due to an error in identification (*Bull. B.O.C.*, XLIII., p. 97).

The Paddy-field Warbler is in general appearance much like a common Reed-Warbler but is considerably smaller, has a comparatively shorter second primary, and the third, fourth and fifth primaries are emarginated on the outer webs and not the third only. As compared with the Marsh-Warbler (*A. palustris*), in addition to the differences above noted in size and wing-formula, the upper-parts (especially the rump) are considerably more rufous or rusty-brown and not so olivaceous. The same differences in colour are noticeable in Blyth's Reed-Warbler (*A. dumetorum*), but in this case the wing-formula of the two birds is very similar and there is not so much difference in size though *A. agricola* is smaller.

Acrocephalus agricola was originally described by Jerdon, and a specimen from Jellore, Madras, without date or sex, in the British Museum is marked as the type and apparently rightly so, as by the register it was the only specimen of the species sent by Jerdon. This specimen, which appears to be in fresh winter plumage, is rather unusually dark rufous-brown above, buff below with brown-buff flanks, while the eye-stripe is greyish-white. Other Indian specimens are usually not quite so dark above, while the under-parts are whiter with a buff tinge, the flanks orange-buff and the eye-stripe clearer white.

There is a complete moult in August–September and a moult of the body-plumage in February–March.

Breeding birds (April to June) from south-east Russia and Turkestan are paler on the upper-parts than Indian specimens,

the throat and centre of the under-parts are whiter, the flanks paler and only tinged with buff and the eye-stripe white. As there are these differences, which do not seem altogether accountable by a difference in winter and summer plumage, it may be as well to give measurements of a series from each region separately, though there is very little difference.

India (October to March) ♂ wing 57-60 mm., tail 50-55, tarsus 20-22, bill from skull 12.5-14. ♀ wing 55-59, tail 49-52, bill 13-15. First primary 1-4 mm. longer than primary-coverts, third and fourth longest, fifth equal or .5-1 mm. shorter, sixth 2-3 shorter, seventh 4-5 shorter, second equals seventh or between sixth and seventh. Third to fifth emarginated on outer webs.

S.E. Russia and Turkestan (April-August) ♂ wing 57-60 mm., tail 48-57, tarsus 19-22, bill 13.5-15. ♀ wing 55-58, tail 47-52, bill 14-15. Wing-formula as in Indian birds, but second primary in a few cases equal to the sixth and in one case equal to the eighth.

Mr. Jourdain gives me the following information: "Eggs from Altai and Kirghiz Steppes are of a very different type to all that I have seen from Kashmir. The latter have pale bluish-white ground-colour with rather bold markings (something like Marsh-Warblers' eggs), whereas all the Kirghiz and Altai eggs are more like diminutive Reed-Warblers'. All these Kirghiz and Altai eggs come through dealers so one has to take them on trust, but it is remarkable that quite a number of eggs have been taken in Kashmir and yet not one of them resembles the type of the south Russian eggs."

Admiral Stenhouse describes his specimen as having the legs and feet very pale brown, bill dark horn above, pale below, iris grey-brown, and inside of mouth pale flesh.

THE ICELAND REDWING.—*Turdus musicus coburni* Sharpe.

TURDUS COBURNI Sharpe, Bull. B.O.C. XII., p. 28 (1901—Iceland).

In 1901, Dr. Bowdler Sharpe described the Iceland Redwing as being paler above and on the flanks than typical examples. His description was taken from worn June specimens and these characters not being found to hold good the Iceland race was not accepted by most ornithologists.

In 1905, in his *Beitrag zur Kenntnis der Vogelwelt Islands*, p. 232, Bernhard Hantzsch upheld the distinction of the Iceland Redwing and gave various colour differences, which on examination did not seem to hold good, and stated that the bird was larger, but as the wing-measurements he gave

were 117-122.5 mm. this was not a convincing difference, as birds of the typical race reach this size.

In 1916, Herr von Lucanus gave certain colour differences as distinguishing the race (*J.f.O.*, 1917, pp. 228-9), but he had examined only two specimens.

Recently, Dr. C. B. Ticehurst has stated (*Bull. B.O.C.*, XLV., p. 90) that the examination and comparison of a considerable series of Iceland birds show that instead of being paler they are slightly darker olive on the upper-parts and decidedly more washed with olive on the flanks than Swedish birds, while the wing of the Iceland bird is usually longer, and gives the measurements of the wings of sixteen Iceland males as 121-128 (one 120.5) mm., 75 per cent. being 122 or over, while the typical form is very rarely as long as 122 in the wing. Similarly, fifteen Iceland females measured 120 to 130 mm.

Four males from Iceland which I have examined measure : wing 119-128, tail 79-85, tarsus 27-31, bill from skull 19-21 mm., and four females have wings 120-122 mm. Continental males are usually not more than 120 mm. in the wing but very occasionally as much as 122. There is thus some overlapping, but the majority of Iceland birds are larger. The colour differences pointed out by Dr. Ticehurst are certainly present, but, as in most subspecies, there is some variation, and colour and size should be taken together.

Dr. Ticehurst had not found any British specimens of the Iceland Redwing in the collections he examined, but subsequently Mrs. Meinertzhagen discovered that a male shot by her husband in east Ross-shire on October 25th, 1924, matched birds of this form in colour and had a wing measurement of 125 mm. (*Bull. B.O.C.*, XLV., pp. 98-9). Furthermore, Surgeon Rear-Admiral J. H. Stenhouse states (*Scot. Nat.*, 1926, p. 8) that two Redwings obtained from a small party at Fair Isle on October 3rd, 1925, proved to be of this race. They were males and measured 124 and 128 in the wing. He also gives wing-measurements of nine males from Iceland, in the Royal Scottish Museum, as 119-125 mm. and ten females 118-125.

The Rev. F. C. R. Jourdain tells me that : " In habits the Iceland Redwing does not greatly differ from the Continental representative, but is naturally not a forest haunter there, as woodlands are almost absent from Iceland. It is, however, to be met with most commonly where birch scrub exists, but not invariably, and I have seen it in districts where trees were entirely absent.

“ The nest is generally on the ground or very close to it among the roots and stumps of birch, but also at times among heather and rough stones (like a Ring-Ouzel’s). Exceptionally it will make use of a niche or hollow among huge boulders.

“ The number of eggs in the clutch varies from four to six and is rather lower on the average than in Continental birds. Breeding begins rather early and full clutches may be found from mid-May onward. Probably a second brood is sometimes reared, as young have been seen in the nest and fresh eggs found in July and young in August.”

Hantzsch states (*t.c.*) that the Redwing arrives in Iceland at the end of March and beginning of April and leaves about the middle of October, but some individuals appear occasionally to winter there, probably in the neighbourhood of warm springs, as Hantzsch quotes records of specimens on November 9th, December 7th and 12th, and Dr. C. B. Ticehurst (*loc. cit.*) one on November 27th, but the occurrence of the bird in winter in Iceland is evidently quite exceptional.

BREEDING OF THE DOTTEREL IN THE PENNINES IN 1925.

BY
ERNEST BLEZARD.

IN 1922, I learned from a friend that he had found a nest of the Dotterel (*Eudromias morinellus*) in the Pennines many years ago, and he pointed out the neighbourhood of the site to me. During the seasons of 1923-4 I made many unsuccessful trips to the Pennines bordering the Lake counties in search of breeding Dotterel, but my efforts were often defeated by the inclemency of the mountain weather.

In 1925, I arrived at my usual hunting-ground on the morning of June 6th. That day's search, like all previous, proved unproductive.

The following morning—after spending the night on the fell—I was on the move back to the tops as soon as the rising sun began to dispel the heavy mists. The heights I aimed for have their flat summits littered with limestone outcrop projecting through short dense grass and lichens.

On the top first gained a lengthy and systematic search was unproductive.

While quartering the actual summit plateau of a second height, somewhat over 2,500 ft. above sea level, I made my first acquaintance with the Dotterel at home, when a brooding bird fluttered off the nest ten yards before me. Many times I had closely passed to one side or other, but it had not made any move until I made a direct approach.

The bird, whose sex I was unable to decide, at once began to distract my attention from the eggs. After darting across my path it gradually worked further and further away in a series of half circles; finding no response on my part it ran back to my feet and repeated the performance. These manoeuvres were carried out rapidly, the bird creeping with legs well bent and breast close to ground, the broadly striped head retracted in line with the back and the tail depressed, full spread and trailed upon the ground, the rump-feathers raised and the wings held loosely. The yellow margins of the ruffled upper plumage and the fluffed-out chestnut flank-feathers attracted the eye. Each time the bird described a curve the outside wing was momentarily raised. When I sat down beside the nest it ran up to my feet, preened its feathers and moved around with a more Plover-like carriage. So long as I kept still it betrayed little anxiety, but any movement on my part was sufficient to cause the recommencement of its

former behaviour. Occasionally it would straighten up to snap at and swallow a crane-fly from among the myriads swarming over the fell top.

A note was uttered only three or four times, this, a single syllabled "windy" whistle, was pitched so very low that if one's attention were not on the bird it might have passed unnoticed.

During my stay at the nest, no second bird put in an appearance.

A natural hollow in the turf, surrounded by embedded stones and near the plateau edge, had been adapted to receive the eggs. Roughly three and a half inches in diameter, it had been comparatively deep, but was filled almost level with fragments of lichen; consequently, the three handsome eggs were quite conspicuous and easily discernible at twelve paces distant, that of course when their position was known.

On June 14th, I returned to the same locality with my friend, Ritson Graham.

As we were steadily pacing the plateau, which I had searched unsuccessfully on June 7th, a Dotterel bobbed up some ten yards in front of my friend and gave every indication of having quitted the nest. Its behaviour corresponded with that of the bird first met with, except that the tail was held horizontally; also that one or two low notes were uttered at the commencement. When I moved nearer, the bird ran towards us, mounted a slight eminence and stood erect almost motionless. While Graham hastened back to where he had dumped his photographic equipment I lay down to continue observation. The bird then ran off without any subterfuge whatever and resettled on the nest ten yards from where I lay.

Erecting his camera, Graham first made a distant exposure, then by crawling carefully nearer, so as not to disturb his subject, succeeded in making a series of exposures from a distance of four feet.

In an attempt to obtain a photograph of the sitting bird in a more alert position than the crouching attitude adopted, we made a variety of noises and movements. Throughout our efforts it appeared interested rather than perturbed, and refused to move. Even the ominous croak of a passing Raven, a sound I have known to have such a disturbing effect on other birds, failed to arouse attention.

Small flies which came buzzing near the nest were snapped at, and several caught and swallowed.

In order that the bird could be photographed beside the eggs, I gently lifted it from the nest, but each time I withdrew

my hand, it immediately raised the under-feathers and plumped down again. Tiring of our interference, the sorely tried Dotterel reverted to decoying actions and broke silence with a low cheeping cry, at first intermittent, but becoming continuous as anxiety increased. The note resembled nothing so much as that of a domestic duckling of tender age.

Wishing to test the old-time tales of the Dotterel aping the fowler's movements, I raised my arms alternately when sitting a yard from the bird; curiously enough, it responded by raising each wing in turn.

No second bird appeared at any time.

Like the first nest, a natural hollow close to the edge of the summit plateau had been adapted and lined with fragments of lichen. The hollow was sheltered on one side by a slab of rock which projected a few inches above the ground.

The three eggs, a trifle smaller and more lightly marked than those first found, were apparently much incubated.

I must have passed the sitting bird many times during my searches the previous week.

On June 28th, we again visited the high ground of the Pennines. On a stretch of plateau-land, immediately below the summit of a higher fell than those on which the other nests were found, Graham almost trod on a deserted Dotterel nest. Its altitude would closely correspond with the others, something over 2,500 feet. It differed in being a typical limicoline "scrape" lined with fine bents. Within a foot, a similar scrape, unlined, showed the Dotterel to possess the characteristic trait of the order in making more than one nest hollow. They were formed in a small mound on stone-littered ground, but not in close proximity to stones as the former nests were. The site agreed in being close to the plateau edge. Of the clutch of three, only one sound egg remained, this along with a shattered one, still lay in the nest. Both resembled in general colour and markings the eggs previously found. The shell of the third egg lay outside the nest and had an unusual ground of a deep cream-colour, with a zone of blackish blotches. No doubt the mischief had been done by a wandering fell sheep which had apparently set its foot in the nest. Incubation had been far advanced when the accident occurred, probably about ten days previously.

THE DISPLAY OF THE PIED WAGTAIL.

BY

HENRY EOASE.

THE courtship of the Pied Wagtail (*Motacilla a. yarrellii*) is rather more elaborate than seems usual among the smaller birds. There is also a grace about its performance which makes it outstanding, an absence of bizarre effects of attitude or behaviour which are almost startling in the case of some birds. The Pied Wagtail is remarkable in that it is also a bird of marked contrast in colour, has a very definite seasonal variation in plumage and is the possessor of a specialized character in the long tail. The somewhat complicated ritual in which it makes its court is probably bound up with these matters, and the general similarity of the plumage of the male and female suggests the possibility of similar behaviour of the two sexes in the courtship. This has not been found to be the case; rather it would appear that for the most part the female Pied Wagtail preserves that air of complete detachment common to most species of bird as the male makes his court, and only in one instance was the female Pied Wagtail seen to join in the performance by providing a ritual of her own.

It would appear that the call is used indirectly in the courtship as a means of attracting a mate to the male in possession of territory instead, as is more general, with Passerine birds, of making use of the song for this purpose. The use of the call in this way is clearly marked when the Pied Wagtail arrives in its nesting places from the south in spring, the ringing "chisk" or "chissik" betraying the presence of recently arrived males along the dry stone dykes and railway cuttings, etc., where so many find a nesting-place. The song seems to be reserved as an expression of well-being and is not used as a means of advertisement for the male.

In its earlier stages the courtship of the Pied Wagtail is a matter of pursuit. From stone to stone, clod to clod, over dykes and boulders, along the railway cuttings and by the sea-shore, Pied Wagtails in twos and threes dance here, there and everywhere as the males endeavour to get the female to pause long enough to inspect their charms. In the first instance the display of the glossy black throat-patch seems the matter of importance, and, when opportunity offers, with head held high and bill pointing upwards at a steep angle, the males face the female. She on the other hand seems little impressed, and after a short run after a wandering fly, takes wing for a yard or two, closely pursued by the anxious males. Time after time the males approach the female to show her

the glory of their plumage, but the female takes little heed, and with provoking restlessness leads them a dance.

What appears to be the next step in the proceedings was seen on another occasion. The female, when she saw that the male meant business, ran to a small semicircular hollow and stood facing him. He approached rather diffidently, jerking the head downwards and forwards, and returning to the normal attitude, the return being accompanied by a quick flutter of the wings. This he did repeatedly as he approached, not in a direct line, but in a zig-zag course, facing to the right and then to the left as he manœuvred towards the female.

In another instance the general circumstances were the same and the male approached the female in the same zig-zag course, but with the head depressed slightly below the general level of the back with the neck at normal extension and the bill lying almost level, and one wing and the tail expanded and pressed down so that they swept the ground. Only the wing nearest the female was spread, and the tail was twisted over to show as much as possible of its upper surface. The head was also inclined in the direction of the female. At each change of direction in the zig-zag course the attitude was changed to meet the new conditions.

On a further occasion the display became a joint affair. The writer gives the particulars as they were noted at the time, in spite of the appearance of an error in judging the sexes. The bird taken to be the male was facing the other when first seen and was bowing rapidly. In the raised position the neck was extended to its limit and the bill was held normally; in the lower position, the neck was retracted, the head being level with the back and the bill slightly uptilted. The other bird, judged to be the female, so far as the plumage gave indication, crept or shuffled with wings and tail moderately expanded and held depressed around the male, which turned about so as to face her.

Still another form of approach of the male was seen where the male drew near the female with wings drooping and tail spread and depressed, the head held low, level with the back, and the feathers of the rump raised, an attitude rather favoured by the Blackbird in like circumstances.

The various forms of the display agree on the whole. The male clearly endeavours to make the most of its charms in advancing towards the female. It is somewhat surprising that, so far as the writer can determine, the display of the throat-patch should be so important only in the preliminary part of the display when the female is first attracted. On occasions, probably when the female gives the time, the male

may pause in a crouching attitude with the head thrown back, the neck being extended and the bill pointing upward, for quite an appreciable time, there being something ecstatic in this finish to a series of short chases in pursuit of the female, no doubt quite an exciting business for the male. Nor is the account of this preliminary stage of the courtship complete without reference to the marked ability in erratic flight possessed by the Pied Wagtail. This is, of course, a feature noticeable at all seasons, yet in these chases in spring the fascinating aerial dancing of this bird, when it appears as a tassel of black and white ribbons in wild gyration as the couples and trios chase and spar, is in itself rather remarkable. Later on, when the young have been reared and are already strong on the wing, the same device is used to feed the youngsters in the air as served to pass a few seconds in exciting argument with a rival.

These various forms of display become, as it were, summed up in a final effort prior, it would seem, to pairing. The action has not been seen as part of the courtship display proper but appears to be a special effort on the part of the male after having secured a mate. On the occasions when it has been seen, the pair has been feeding without any marked appearance of excitement; suddenly the male has changed its attitude and become transformed into a miniature Peacock. With head held high and bill inclined upwards, wings drooping or slightly spread and the tail spread and erected vertically, the male Pied Wagtail becomes a striking little figure. So rehabilitated he makes for his mate, which may or may not meet his advances. So far as has been seen, the female has no definite display or attitude in meeting the male. The male may vary his performance in detail. In one case he fluttered his half-expanded wings when approaching the female instead of allowing them to droop; in another instance he varied the performance by springing a few inches into the air fluttering the wings. The female has been generally inattentive, finding interest in a passing fly or in preening, and the whole business may end in a wild pursuit.

In point of date most of the display seen has been during the comparatively narrow period extending from the last week of March until the third week of April, the period during which, in the eastern Tay area, the Pied Wagtail comes in from the south. The pairing display is of course given at later dates, but in general the finding of a mate appears to occupy the attention of the birds immediately on arrival in the neighbourhood of their nesting places. Incidentally, display has been seen for the most part on ground where the bird does not nest.

NOTES

MUD-DAUBED EGGS OF JACKDAW.

SINCE the publication of my note on this subject (Vol. VIII., p. 14) I have annually visited as many nests of the Jackdaw (*Colæus m. spermologus*) as possible without finding another case of the same sort. On April 30th, 1926, the first nest I looked in at Saling, Essex, contained four very well and evenly daubed eggs. As the weather in Essex had recently been very wet I thought that the daubing might have been accidental, but not a single egg in any other nest had the least speck of mud on it; the entrance holes to all the nests I visited were well smeared with mud. I can therefore only come to the conclusion that the mud was daubed on these eggs deliberately. All the birds had been sitting some time. The daubed eggs I took and have offered to the Essex Museum; they had been sat on for nine or ten days; three were fertile and one addled. These nests were all in holes in trees and the daubed eggs easily visible from the entrance.

J. H. OWEN.

COUES'S REDPOLL IN YORKSHIRE.

My friend, Mr. C. H. Hargreaves, picked up in his garden in Alma Square, very near the railway station at Scarborough, on Friday, December 18th, 1925, a small Finch in a disabled and dying condition. The bird was brought to me and proved on dissection to be a male, probably adult, the cause of death being a fracture of the base of the skull. From the large wing measurement and unspotted white rump I thought the bird might be Coues's Redpoll (*Carduelis hornemanni exilipes*). The skin was examined by Messrs. R. Fortune, H. F. Witherby, and Dr. Hartert, all of whom confirmed this identification.

W. J. CLARKE.

CROSSBILLS IN SURREY.

ON August 2nd, 1925, two flocks of Crossbills (*Loxia c. curvirostra*), fifteen and sixteen in number, arrived in East Surrey, flying over the tops of some fir trees uttering their characteristic notes, "chip-chip-chip." The flocks joined up and settled at the top of the firs. At a later date there were many more there.

I examined the green cones, which the birds dropped in large numbers, but could find no trace of insects, nor young

seeds, and there did not seem much green fleshy substance to feed on.

The Crossbills were still at the same spot on December 21st.
C. W. COLTHRUP.

MARKED WHEATEAR NESTING IN THREE DIFFERENT LOCALITIES.

FOR ringing Wheatears (*Enanthe æ. ænanthe*) I visit near Seaford, Sussex, five valleys, which are next to one another and roughly parallel.

Ring A 2918 was put on a nestling Wheatear on May 18th, 1923, in the most westerly valley. On May 17th, 1925, she was caught on eggs in the middle valley; having deserted she was again caught sitting in a fresh nest in the most easterly valley on June 3rd, 1925; she continued to sit and reared four young (*vide* Vol. XIX., p. 98).

On May 9th, 1926, she was caught in the second valley on the west, covering young two days old.

Another Wheatear, which I caught and ringed (B.2509) as a breeding female on May 19th, 1924, I found nesting and recaptured on May 23rd, 1926, in a valley a mile away.

It may be interesting to mention that this bird, in 1924, had its nest less than twenty yards away from the hole which was, in 1925, occupied by the first nest of A.2918.

These records seem to show that some Wheatears are not strongly attached to any particular territory.

J. F. THOMAS.

REDSTART NESTING UNDER FURZE-BUSH.

REDSTARTS (*Phœnicurus ph. phœnicurus*) were fairly common in east Surrey in 1925, and on May 3rd I watched a female building her nest in a hole in dead furze needles, under a furze-bush. Each time she brought material she was accompanied by the male, who sang snatches of song while she was in the hole.

On the 9th there were three eggs which I replaced with Hedge-Sparrows, with the result that the nest was deserted. Later, I found three young Redstarts in a nest in a hole in a birch tree close by, probably the remainder of the clutch.

C. W. COLTHRUP.

GARGANEY, GADWALL AND GREAT SKUA IN LANCASHIRE.

ON April 25th, 1926, when in company with Mr. R. Wagstaffe, I had a close view of a drake Garganey (*Anas querquedula*) at Ainsdale. The bird was consorting with Mallards and Sheld-

Ducks on one of the dune tarns there. A drake Gadwall (*Anas strepera*) was in the same quarter on March 17th. We came across the bird several times during the day.

As the Great Skua (*Stercorarius s. skua*) is an uncommon migrant on the vernal passage here, it may be worthy of mention that an adult was observed by Mr. Wagstaffe and myself on Ainsdale Beach on March 7th. When put up, the Skua took a north-westerly course.

The Brent Goose (*Branta bernicla*) is also uncommon on the local dune coast. I saw a small skein flying low and south-west during the snowfall of January 17th, 1926.

F. W. HOLDER.

HARLEQUIN-DUCK IN LANCASHIRE.

THROUGH the kindness of Mr. R. Mason of Poolstock, Wigan, I have examined an adult drake Harlequin (*Histrionicus histrionicus*) which was shot about ten years ago at Crossens at the mouth of the Ribble. It was shot in flight by a Mr. Valender of Wigan, whom I have not seen, but who gave his information to Mr. Mason. The actual date is uncertain, but Valender was sure that it was during the war; on that point he was quite clear, and he believed that the month was January. That it was fairly early in the war years I gather from the statement he made that it was before paper money came into use, and I should say that it was in the winter of 1914-15 or 1915-16, though he thought it was in either 1916 or 1917. The bird was with one or two other ducks, all flying very fast, when he dropped it, but there is no evidence that these were Harlequins. He had no idea what it was, nor could any of his fellow wildfowlers identify it. After keeping it for some time, he gave it to a relative, from whom Mr. Mason purchased it when he saw what it was; Mr. Mason confirmed his own identification by comparing the bird with Gould's plate and a specimen in the Liverpool Museum.

It is a drake, apparently mature, for the tail-feathers are pointed, and the speculum is metallic. It was very clean when shot, so Valender says, and is in excellent condition. Platt of Hindley, who mounted the bird, is, I believe, dead, so it is hardly possible to obtain the exact date.

Mr. Hugh Wormald, from whom I enquired if there was the possibility that it was a bird that had escaped from captivity, assures me that if the bird is a Harlequin it can safely be recorded, as to the best of his knowledge only three birds have been in confinement in this country during the last fifty years, and these were three reared from eggs obtained from Iceland,

one of which is still alive in his possession. Another that he reared was killed by a stoat, and a bird reared by Mr. St. Quintin died in its first winter. T. A. COWARD.

COLORATION OF SOFT PARTS OF NESTLING COMMON HERONS.

THE following notes on the soft parts of the nestling Common Heron (*Ardea c. cinerea*) are based on observations taken at nests in 1925 and 1926. In all forty nestlings were examined ranging in age from newly-hatched young to birds in full juvenile plumage.

Iris, yellow; bill, upper mandible greyish-brown, becoming bluish-grey when the bird is feathered, lower mandible yellow; legs and feet green, turning a greyish-brown in the juvenile bird.

An adult Common Heron, caught on May 1st, 1925, through the bird being badly winged, had both mandibles coloured yellow. R. H. BROWN.

WOODCOCK BREEDING IN BUCKS.

RECORDS of the breeding of the Woodcock (*Scolopax r. rusticola*) in Bucks appear to be few and not recent. One is now, April 7th, 1926, sitting on four eggs in a wood in the neighbourhood of Whaddon. The nest is situated at the foot of a nut sapling in an open part of the oak wood, where the ground is mainly covered with tussocks of dried grass. There is no bracken in this wood. The four eggs, lying on a small bed of oak-leaves, are completely exposed to view when not covered by the sitting bird. H. L. COCHRANE.

VARIETIES AMONG GULLS.

IN the course of marking with rings 10,900 chicks of Gulls, and handling several hundred of others in addition, I have been very much struck by the very few varieties among them, as far as the plumage is concerned. Among this large number I have only met with two varieties. The first was a very pale coloured feathering chick of the Black-headed Gull (*Larus ridibundus*) in the Ravenglass colony in Cumberland on June 10th, 1922, which I have preserved. The other was a fully feathered chick of the Lesser Black-backed Gull (*Larus fuscus affinis*) in the Scilly Isles on July 12th, 1925, which was a melanic variety, the under-parts being very dark brown. I did not preserve it, but marked it with ring No. 24621.

In the second sale of the late Sir V. Harpur Crewe's collection at Stevens's in February, 1926, was an adult Herring-Gull (*L. argentatus*) whose primaries were white throughout.

During the summer of 1925 a pair of what looked like enormous Herring-Gulls were evidently breeding on one of the Scilly Isles. The tips to the primaries were black, but the call and flight of the birds were those of the Great Black-backed Gull (*Larus marinus*). They were most certainly not Glaucous Gulls.

H. W. ROBINSON.

GREAT BUSTARD IN YORKSHIRE.

A GREAT BUSTARD (*Otis tarda*), as has already been reported in the Press, was picked up dead on Islebeck Grange Farm, near Thirsk, on March 1st, 1926. The bird had been noticed in the neighbourhood since about Christmas, and it is just possible that it had been noticed previously at Flamborough, where a so-called Eagle had been reported.

The bird had not been shot, and it must have died of starvation as it weighed only 6 lbs. 14 ozs. and was an adult, sexed a female by Mr. R. Lee, who stuffed it. At some time or other one of its legs had been broken, but this was an old injury perfectly healed. The liver was much enlarged, very hard and covered with white spots.

RILEY FORTUNE.

[The above occurrence and that already recorded from co. Cork (*antea*, p. 236) are interesting in view of the fact that a number of Great Bustards appeared in France in December, 1925. The following are recorded in the *Revue Française d'Ornithologie*, February, 1926, pp. 92-5, viz. :—December 8th Lorraine, December 9th three in Isère, about the same time occurrences in Saône et Loire, Côte-d'Or and Marne, and on December 24th in Oise. Others are mentioned in the April issue of the same journal. These records indicate a westward movement of the bird in unusual numbers.—EDS.]

RARE BIRDS IN FAIR ISLE.—Mr. J. Wilson records (*Scot. Nat.*, 1926, p. 4) that a Færoe Snipe (*Capella g. faeroensis*) was obtained by him at Fair Isle on December 23rd, 1925, and a female Hornemann's Redpoll (*Carduelis h. hornemannii*) on November 12th, 1925.

On the same page Mr. J. Stout states that he obtained at Fair Isle on October 24th, 1925, a male Lanceolated Warbler (*Locustella lanceolata*), which is only the fourth recorded British occurrence, and on November 9th a male Short-toed Lark (*Calandrella b. brachydactyla*). All these have been preserved in the Royal Scottish Museum, Edinburgh.

In the same issue of the *Scottish Naturalist* (pp. 7-10) Surgeon Rear-Admiral J. H. Stenhouse gives his observations at Fair Isle during a visit from September 3rd to October 7th, 1925. Thirty to forty Redpolls, which proved to be of the Greenland race (*C. linaria rostrata*), were present in scattered parties, as also were some Lapland Buntings (*Calcarius l. lapponicus*) during the whole time of his visit. Other birds of interest were:—An Icterine Warbler (*Hippolais icterina*) on September 8th, a Yellow-browed Warbler (*Phylloscopus h. præmum*) on September 17th, and another on the 19th, and on the same day a Rustic Bunting (*Emberiza rustica*). On September 20th an Ortolan Bunting (*E. hortulana*) is recorded, and this appears to be the first autumn record of the bird at Fair Isle since 1915. "After this date" (actual dates not given) notable arrivals included another Rustic Bunting, a Little Bunting (*E. pusilla*), a Scarlet Grosbeak (*Carpodacus erythrinus*) and a male Siberian Lesser Whitethroat (*Sylvia curruca affinis*), this being the fourth record for Fair Isle of this bird, which has not yet been detected elsewhere in the British Islands.

The occurrence of the Petchora Pipit, the Paddy-field Warbler and the Iceland Redwings, referred to on another page, make, with the records above mentioned, a wonderful list of rare visitors in one autumn even for Fair Isle.

Admiral Stenhouse also notes (p. 10) that a Barn-Owl of the typical race (*Tyto a. alba*), of which there was no certain record for the Orkneys or Shetlands, was captured at the Fair Isle (South) light-house in February, 1924.

GREY WAGTAIL BREEDING IN SURREY.—Mr. C. W. Colthrup informs us that he found a nest with five fresh eggs of *Motacilla c. cinerea* in Surrey on July 2nd, 1925, and that a pair of birds had brought off a brood of five from eggs laid in May at the same place.

GREAT SPOTTED WOODPECKER IN AYRSHIRE.—In connection with the spreading of this Woodpecker in Scotland in recent years, the appearance of one in the Darvel district of Ayrshire in the spring of 1925 is interesting. Mr. N. Hopkins, who gives this information, states (*Scot. Nat.*, 1926, p. 10) that the bird was seen from mid-April until mid-May, and that its borings were found, though no actual proof of nesting or indeed of a second bird was forthcoming.

COMMON BUZZARD IN HAMPSHIRE.—Mr. C. W. Colthrup reports that he saw a *Buteo buteo* on Nov. 6th, 1925, near Bournemouth.

WHITE STORK IN SUSSEX RINGED IN DENMARK.—In a paper dealing with the results of eight years marking of White Storks (*Ciconia ciconia*) in Denmark, P. Skovgaard (*Danske-Fugle*, 1926, 2, 57) states that a bird of this species was marked when young at Asfærg, Denmark, in the summer of 1922, and was recovered at East Preston, Sussex, on October 7th, 1922. The record has an added interest for British ornithologists in that occurrences of the species in this country have sometimes been thought not to refer to truly wild birds. It is one of several records indicating that some White Storks from Denmark, like those from western Germany, take a south-westerly direction in autumn. The remaining and more numerous records follow the south-easterly direction shown by the earlier work of Mortensen, this being also the direction followed by birds from the greater part of Germany and from Hungary as demonstrated by the results of Thienemann and of Schenk (*cf.* Thomson's *Problems of Bird-Migration*, Chapter X.).

In the same number of the journal, Skovgaard gives the results of marking of Black Storks (*Ciconia nigra*) and Herons (*Ardea cinerea*) in Denmark. The Black Stork also shows migration in alternative directions, south-west and south-east. The records for the Heron, like those previously published by Mortensen and Saxtorph, show a south-westerly movement only.

EARLY MIGRATION OF DOTTEREL.—Mr. R. B. Burrowes informs us that he saw five *Charadrius morinellus* in company with a large flock of *Ch. apricarius* on a newly sown cornfield in south-west Lancashire, on April 11th, 1926.

COMMON GULLS FEEDING ON FROGS.—Two castings of *Larus canus* found with many similar ones in Inverness-shire in July, 1922, by Dr. W. Eagle Clarke, have been examined by Dr. James Ritchie (*Scot. Nat.*, 1926, pp. 22-3), and found to consist of numerous bones representing twenty-one individuals of the common frog (*Rana temporaria*). Mr. D. Knight Horsfield announces (*op. cit.*, 1926, p. 59) that in Sutherland he found little heaps of bones where there were Common Gulls, and these have also been found to belong to the common frog.

REVIEWS

The Birds of Hareshawmuir. By Richmond Paton. (Kilmarnock: "Standard" Office). 4s. net.

IN his preface to this little work the author states that it is his desire and ambition to write the full story of the birds of Ayrshire, but that he feels it safer for the present to confine his records to the smaller area within the county with which he is most familiar. This sectional work being now accomplished, and very satisfactorily we think, it is hoped that Mr. Paton will carry out his ambition with regard to the larger work, which is very much wanted. The book before us is really a second edition slightly revised, the first having been privately issued a year before.

Mr. Paton gives a good and careful account of the status of each species and adds a good many interesting data of movements and migrations as well as of breeding and other habits observed within his area. His work shows considerable care and is usually free from statements which seem to require substantiation. Under Eagle-Owl we find the withdrawal of a supposed occurrence in December, 1915 (see *Brit. Birds*, Vol. IX., p. 216), Mr. Paton now considering that the bird was really a Short-eared Owl magnified by mist. The statement that Swallows fledged in the middle of September in all probability perished in migration seems uncalled for in view of the fact that Swallows regularly occur on passage until the end of October. The interesting fact that no less than three subspecies of Song-Thrushes have occurred in this small district has already been recorded in these pages (Vol. XVII., p. 165; XIX., p. 175).

Mr. Paton is to be congratulated on a very useful little addition to our local avifaunas.

Transactions of the Norfolk and Norwich Naturalists' Society. 1924-25. Vol. XII. Part 1.

IN last year's Transactions of this well-known Society there are several items of interest and importance to ornithologists. As a result of an agreement with the local fishermen, who had passed a resolution that the protection of Terns at Blakeney Point had resulted in material loss to them, an investigation into the precise food of the Terns during the breeding season was undertaken. With the sanction of the authorities concerned, two Common Terns per week were shot as well as in all six Little Terns and nine Sandwich Terns. These were sent to Dr. W. E. Collinge, the result of whose investigation is here given in admirable form. Dr. Collinge summarizes his results by stating that the food of the Common Tern at Blakeney Point consists of 40.32 per cent. of fish, of which 25.48 per cent. is food fishes and 14.84 per cent. sand-eels. Species identified were whiting, haddock, herring and whitebait, all of which occur in prodigious numbers. Taking the three species of Tern together, the averages of the food eaten were:—Food fishes 19.60 per cent., sand-eels 16.54 per cent. and the remainder crustaceans, annelids, marine molluscs and insects. No trace was found in any stomach of flat fish, the diminution of which was the main cause of the enquiry.

Other papers of interest are:—"Norfolk Heronries," in which Dr. B. B. Riviere has given as complete a list as possible of existing Norfolk Heronries and the numbers in each; "The Swan-Roll in the Norwich Castle Museum," by Dr. N. F. Ticehurst, and "The Norwich Corporation Swan-herd's return for 1925," by Dr. S. H. Long; Report of the Committee on "Wild Bird Protection in Norfolk in 1925," which contains some valuable notes by Miss Turner on the spring migration as observed at Scolt Head; and "The Colour of the Iris in the Hawfinch," in which Mr. R. J. Howard states that in 1884 he found the colour in the live bird was "madder-brown," which varied in intensity by the rapid dilation and contraction of the pupil, and only on death became greyish-white. This observation, by Mr. Howard, which doubtless gives the correct colour of the iris of the Hawfinch, is quoted, it may be remembered, in Mitchell's *Birds of Lancashire*, 2nd Ed., 1892, p. 66.



LETTERS



THE CALL-NOTE OF THE CHAFFINCH.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the notes on the "Call-note of the Chaffinch" (Vol. XIX., p. 283), in June and July, 1924-1925, the Chaffinches at Loèche-les-Bains, Valais, Switzerland (4,600 ft. pine-woods and meadowland); had the "*spink spink*" call-note but did not use it so much as in England; the note we chiefly heard was a longer-drawn "*breet*" or "*bree*"; a variant, I thought, not of the "*spink*" note, but of a similar but less sharp and metallic note they have in England, which may be written "*whet*." I am not sure whether the last note is only heard in summer, it is certainly more frequently heard then.

MARJORY GARNETT.

To the Editors of BRITISH BIRDS.

SIRS,—The Rev. F. C. R. Jourdain in his note to Mr. W. H. Thorpe's letter on the above subject (Vol. XIX., p. 284) states that he regards this variation in the call-note as geographical. It may therefore be of interest to record that I have heard the Greenfinch-like note used by the species in Savoy (coniferous forests on slopes of Mont Cenis Pass, altitude 5 to 6,000 feet), and also in the Dolomite district of Northern Italy (again in coniferous forests).

In the latter district I noticed that the *Song* of the Chaffinch also differs from that of our British bird. The whole phrase is much less hurried and jerky, with the penultimate note much less emphasized, with the result that the song dies away quietly instead of ending abruptly.

GEORGE W. TEMPERLEY.

To the Editors of BRITISH BIRDS.

SIRS,—I am interested to see the references in your March number to the Greenfinch-like notes uttered by some Chaffinches. My wife and I have been considerably puzzled by similar observations here at Maadi, near Cairo. Frequently in the winter we have heard that long-drawn call-note, and said to one another "Greenfinch." But the Greenfinch is quite a rare visitor in this part of Egypt and when we have traced the note to a particular bird it has nearly always turned out to be a Chaffinch. On thinking the matter over we find that we have never actually connected this Greenfinch-like call with a *cock* Chaffinch. By the way, hen Chaffinches appear to much outnumber the cocks here and the sexes do not always keep strictly separate. We often hear the "*pink, pink*" of a Chaffinch during the winter, but it strikes us that this call is not delivered with quite the same hard metallic emphasis as in England. I should add that there is no record of a Chaffinch breeding in Egypt. The not very numerous winter visitors presumably come from central Europe.

R. E. MOREAU.

REDSHANK'S METHOD OF OBTAINING FOOD.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Sydney G. Poock's letter (Vol. XIX., p. 318) on this subject, I recorded in Vol. XVII., p. 227, that the Redshank and Dunlin will obtain food by jumping on the ooze and then probing the place with their bills.

R. H. BROWN.

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NOTES ON ALBERTA WADERS INCLUDED IN THE BRITISH LIST.

BY

WILLIAM ROWAN, M.SC., F.Z.S., M.B.O.U.

PART II.

GOLDEN AND GREY PLOVERS.

(Plate 3.)

Charadrius dominicus dominicus, AMERICAN GOLDEN PLOVER.

THE American Golden Plover has achieved world-wide fame on account of its remarkable migrations. As a matter of fact, there is good reason to suppose that these are not even yet fully understood. But to this point I shall have occasion to return.

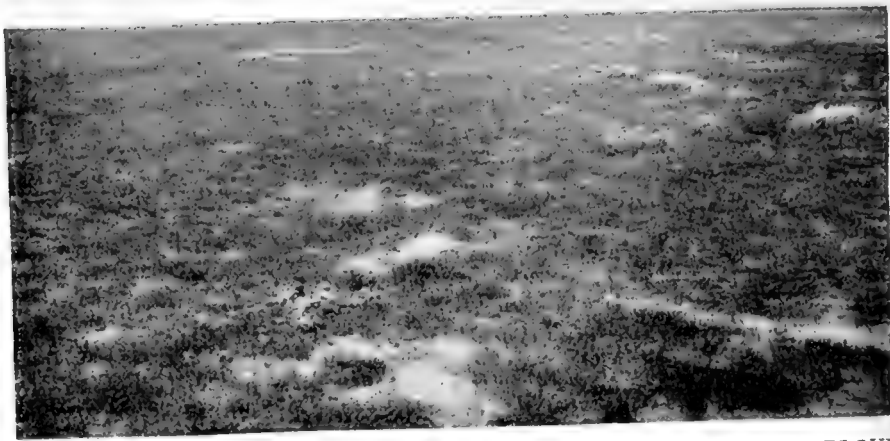


FIG. 5. TYPICAL FEEDING GROUND OF AMERICAN GOLDEN PLOVER
AND BUFF-BREASTED SANDPIPER.

(Photographed by W. Rowan.)

The arrival of this species at our lake is precipitate, for there may be none to-day and hundreds to-morrow. The flocks would appear to arrive by night, for they are there at daybreak, when one usually takes the first walk round. They are not birds of the shore-line in the spring, but, like the Buff-breasted Sandpiper, they seem nevertheless chiefly to frequent

country adjacent to some large lake. This, together with their mode of arrival in considerable flocks and evidently at night, suggests that they have travelled a considerable distance from their last stopping place. They stay with us some days and then go in the manner in which they came, *en masse*. We have no records earlier than May 8th, when the birds may first be expected, but the main contingent arrives nearer the 16th or 17th, while by the 23rd or 24th they have usually all gone. Their period with us is therefore brief as compared with the majority of shore-birds. Stragglers may of course remain, and in fact do so probably throughout the summer. Thus, our latest spring record (a single bird) is June 18th. I do not agree with the opinion so frequently expressed that records such as this are of birds travelling either to or from the Arctic. They are much more likely to be individuals, the normal development of whose reproductive organs has been for some reason inhibited and that are lingering on the road, never to complete their migration. This point has, however, been fully discussed in another paper to appear elsewhere. Suffice it to say that these strays differ in their habits from ordinary spring birds, for they take to the shore and there associate with all kinds of other waders, most frequently with the Grey Plover and Knot.

Our autumn migration is remarkable primarily on account of the fact that it is not supposed to exist. All self-respecting Golden Plovers should eschew the prairies after the breeding-season and go south *via* the Atlantic Ocean and sea-board. But the case is actually far otherwise, for we have notes of hundreds going south in a single day in mid-September, when the main movements occur annually. An interesting feature of the fall migration of Golden Plovers is that it consists entirely of young birds. The earliest record we have is August 18th and the next August 24th. These are rather early, September being the chief month of arrival. The fall movements are protracted, and we may have small flocks with us till towards the end of October. Another feature of the autumn migration is a change of habit. The birds, while often noted on pasture (particularly if in large flocks), more usually frequent the muds and behave like the majority of other waders. They associate freely and habitually with other species. They behave like the strays of the spring. Being birds of the year there is no doubt in their case that they are sexually undeveloped.

We have a single record of an adult bird in the fall, collected by Harrold on August 22nd. It was noted the previous day,

but not secured, and proved to be a female well advanced in its moult. There is one other reliable autumn record for an adult Golden Plover from the Province, seen at Sullivan Lake in July by Mr. T. E. Randall. Until we have spent the whole of July at our lake or some other suitable observation station it will be impossible to say that adults *never*—except accidentally as strays—come south through the Province, but all the evidence available indicates that they do not do so. I have gathered a mass of corroborative facts, not yet published, from the important collections in the States and Canada, and the evidence all points the same way. It is sometimes maintained that the adults *do* pass through the interior, but as early as the beginning of July, travel very fast and escape observation. There is not one scrap of evidence in favour of this view and all kinds against.* Cooke's theory (*Distribution and Migration of N.A. Shore Birds*) of the Atlantic route is based on countless records and is no doubt correct—if *applied to adults only*. Possibly a few birds of the year accompany them even as a few adults straggle down the Mississippi valley. But Cooke attaches little significance to the inland records, in spite of the fact that in some inland localities, in the days when the Golden Plover was counted in millions, it was reputed to be more abundant in the fall than in the spring, e.g. Minneapolis (Roberts, *Water Birds of Minnesota, Past and Present*). It is not only in Alberta that the species goes south in *flocks of young only*, but also in Saskatchewan and Manitoba and probably Ontario. The general drift over an enormous front appears to be south-east, and the birds ultimately strike the Atlantic, some even as far north as Canada, and then go south along the coast. When it is recalled that this species came very near total extermination and is only gradually recovering its numbers and that in the fall we see only birds of the year and only a fraction of them, it is not to be wondered at that we do not get them in thousands, but neither do we get them in prodigious numbers in the spring. Audubon witnessed, in 1821, the

* I am indebted to Mr. A. G. Lawrence of Winnipeg for sending me the following quotation from Barrows' *Michigan Bird Life*, 1912. "It" [the Golden Plover] "is commonly seen in large flocks from September to November, but the larger number appear during the latter half of September and linger for a month or more. These appear to be mainly young of the year, and they are in the grey plumage characteristic of the young birds. It seems certain that the old birds pass south in August and early September and that a large part of them travel along the sea coast, or even over the open sea, past Bermuda and the Lesser Antilles, to the north coast of South America."

slaughter, near New Orleans, of 48,000 Golden Plover in a day. It is questionable if a single observer, however favourably situated, could now see that number in a year.

If there are really two southward migration routes, one for adults, the other for young, the matter is one of exceptional theoretical interest, for the young take the normal spring route. This is no doubt the primitive route and is inherited, for the young follow it without guidance, removed by some two thousand miles from their parents. The Atlantic route adopted by the adults must be a comparatively recent discovery, is inherent, and is followed annually by memory and precept. Since the adults leave their young in order to go south like so many other waders, the young cannot take this route till they themselves have become parents and in their turn leave their offspring to find their own road while they stick to the other adults who have previously taken the comparatively new route and take it again.*

One of the chief troubles in attempting to analyze the movements of this species is the difficulty that the average recorder finds in telling adults in winter plumage from young and the American Golden Plover from the Grey Plover. As to the former, there is no doubt that the majority of supposedly adult Golden Plovers taken in the fall are juveniles, which show extraordinary variation in plumage. In a long series in my own collection it is scarcely possible to match any one skin with another. The adults that complete their moults before reaching their wintering grounds, if there are any at all, must be few and far between (see Hudson, *Birds of La Plata*, and Gibson, *Ibis*, 1920. Also Dwight, "Moults of N.A. Shore Birds," *Auk*, 1900). As to the latter, literature is full of references to the great difficulty in distinguishing between the American Golden Plover and the Grey. Even Horsbrugh (*Ibis*, July, 1918) has recorded from Alberta, Golden Plovers that were actually Greys, for his specimens are still extant in one of the big collections in the east. Errors are so frequent that I have found it poor policy to accept any Golden Plover records without examining specimens in support.

*G. H. Mackay ("Habits of the Golden Plover in Mass., U.S.A.," *Auk*, 1891) gives an account of thirty-two years' observations at Nantucket. He particularly points out that the large flocks of storm-driven Golden Plovers that afforded the famous shoots, were composed entirely of adults and the shooting did not begin till the end of August. Flocks of young were casual and irregular, and their arrival, unlike that of the adults, did not synchronize with storms. His explanation of the situation is impossible. The facts exactly fit the views expressed above.

It seems to be generally unknown that the two species can be told apart in flight by the dark tail of the Golden and the light tail of the Grey. The further they recede the greater the contrast, for the former then looks black while the latter appears to be pure white. I notice that even the *Practical Handbook*, which misses so little that is of any value, fails to draw attention to this fact. Alas, but few waders are so contrastly marked, so completely fool-proof. Any one who can tell black from white can distinguish them. If they are at rest one only has to put them up to see the glaring labels (Plate 3). In addition, the Grey has black axillaries and a conspicuous wing-bar, while the Golden lacks the latter and has pale axillaries. Added to all this is the characteristic call of the Grey Plover, and what more is needed to make the birds separable in the field one cannot guess.

In the spring the American Golden Plover generally holds itself aloof from other species, although even large flocks may from time to time associate with flocks of Grey. Since the Grey Plover and the Knot are frequently in company, Golden Plover and Knot form an occasional combination. The rare Buff-breasted Sandpiper often accompanies bands of Golden and we have seen the situation reversed, two Golden with a flock of Buff-breasted. The spring habits of these two species are much alike and the association is no doubt natural.

In its flight and general ways when on the ground, the American Golden Plover is quite like the British. It is exceedingly swift in flight and generally direct, though capable of very spectacular manœuvres when circling over and around its feeding grounds. The birds are wary and difficult to approach as a rule, whatever their disposition may have been in the old days (see Forbush, *Game Birds, Wild Fowl and Shore Birds*). We have found it practically impossible to whistle them within gun range. On the ground they behave exactly like the British bird. They run long distances, peck constantly at something or nothing, and are ever on the alert. They feed, like most Plovers, in loosely scattered bands. Certain pastures are frequented annually, and daily while the birds are in the district.

A flock in flight, when shot into, always shows the same reaction. The birds drop like hailstones nearly to earth, skim along the ground for a short distance, re-collect themselves and slowly rise again. (The same thing has been recorded of the Golden Plover in India and elsewhere.) If a flock is passing over out of range, a shot will bring it down, but at such incredible speed, each individual by itself, that



GOLDEN & GREY PLOVERS.

Foreground: left to right (1) Juvenile Grey; (2) American Golden; (3) Asiatic Golden. Background: left to right (1) Adult Grey; (2) Juvenile Grey; (3) American Golden. Flying: left to right (1) Grey; (2 & 3) American Golden. All September.

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none but the swiftest of marksmen could hope to make use of the fact. We have observed similar behaviour in the case of several other kinds of shore birds. I have never known Golden Plovers to return to wounded or dead companions dropped from their ranks as do so many other species.

Young birds in the autumn are far easier to approach than spring adults, but even they are wary and one cannot often walk within range of them. But like so many other birds that object to being walked up, they will often fly by in range of their own accord.

This species is somewhat silent on the whole. Probably the commonest note is a rather soft, melodious hū, most frequently uttered in flight. It sometimes appears in disyllabic form, when it is strongly reminiscent of the common call-note of the British Golden Plover on its breeding grounds.

With regard to the summer range of this species, MacDonald found it breeding sparingly on the Barren Lands in the region of Artillery Lake and the head of the Coppermine River in 1924. This appears to be a south-western extension of its known nesting grounds.

Charadrius dominicus fulvus, ASIATIC GOLDEN PLOVER (A.O.U. Check-List, PACIFIC GOLDEN PLOVER).

The only inland record for the continent, a juvenile male, was collected by Harrold on September 9th, 1925, on our Point. It was noted in a flock of fourteen young *dominicus* on account of the bright yellow of the head, neck and back. Harrold told me that it was so conspicuous that it could be detected (and was) at a distance of eighty or ninety yards without the aid of glasses. The specimen compared with my British skins appears to be even more contrasty, and I should imagine there would be no difficulty in detecting it if encountered at home.

The great difference between the juveniles of *dominicus* and *fulvus*, seems to me sufficient to warrant considering the birds full species rather than subspecies.

Squatarola squatarola, GREY PLOVER (A.O.U. Check-List, BLACK-BELLIED PLOVER).

I admit that our bird is *supposed* to represent a good subspecies, *cynosuræ*, but as I am far from convinced that there is anything more than supposition to justify its recognition, I prefer to leave the matter open. Although I have only

twenty-three skins in my collection at the moment, the wings of males vary from a minimum of 176 mm. to a maximum of 200, and females from 184 to 199 mm. The averages for males only, females only and both sexes together, happen to be the same, 191 mm., in each case. Average size in a bird so variable as to measurements means very little, and this by itself seems to me to be inadequate for the separation of any subspecies. It seems particularly valueless if the species concerned, as is the case with the Grey Plover, is of circumpolar distribution.

Since the Grey Plover is very abundant with us and comparatively uncommon at home, the following comments may be of interest. At our lake it is one of the later arrivals in the spring, seldom appearing before the middle of May. It stays generally in some numbers till the end of the month and may linger till the second week of June. It is back again by the end of July and gets common early in August, but only adults have so far been recorded till the fourth week of August, when juveniles begin to arrive. Thence onwards the adults get scarcer and the young more plentiful, the latter attaining their maximum numbers towards the end of September and, remaining plentiful through the major portion of October, may stay right into November, even for a week or two after the lakes have frozen over. By the middle of September the adults have all gone, although we have a single record of one in the third week of the month. They are still in summer plumage, in various stages of moult. Like practically all the other waders, they acquire winter plumage after they have left us. In fact, with the exception of the Dunlin, and the Hudsonian Godwit (*Limosa hæmastica*), I have never here secured or seen an adult shore bird of any kind in full winter dress. Abel Chapman's contention (*The Borders and beyond*) that young waders desert their parents on the breeding grounds and leave them to moult prior to undertaking their various journeys, would not be supported by any species on this side, except perhaps the Dunlin and Purple Sandpiper, for the adults all come south ahead of their offspring and moult on the road.

The Grey Plover appears to be particularly irregular in its moults. It is a comparatively common thing to see birds in full winter plumage, or nearly full, on the spring migration. I should roughly estimate the frequency at something like five per cent. We have noted the same thing, though rarely, with the Golden Plover, Sanderling and Knot. In all these species such aberrations are easily detected. They no doubt occur also with other species.

The Grey Plover is a bird of the shore-line, although frequently seen on meadowland or even summer fallow. It associates habitually with the Knot and mixes freely with other species, particularly the Golden Plover. It is one of the wildest and wariest of the waders, even the young being difficult to approach. It is inclined to be noisy and is a perpetual nuisance when one is trying to collect other species by giving its ever-ready alarm and putting them up. Flocks are usually small (Fig. 6)—anything up to thirty—except when the birds are ready to start on the next lap north, when

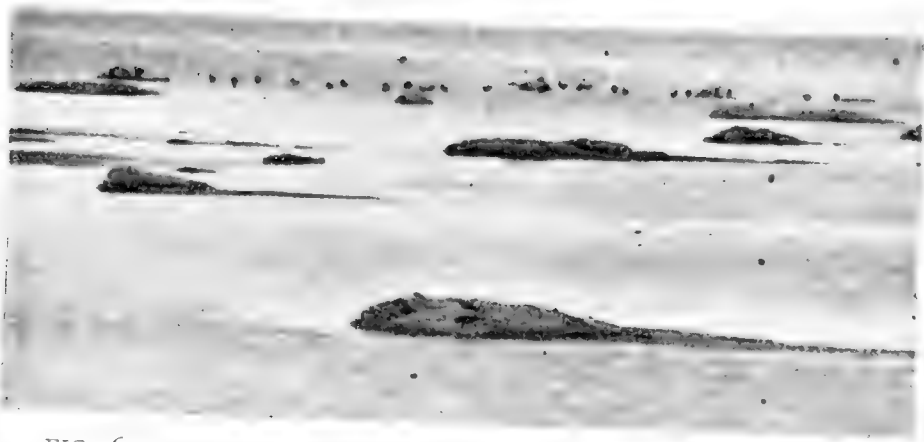


FIG. 6. A FLOCK OF GREY PLOVER ALONG THE FORESHORE.
(*Photographed by W. Rowan.*)

they may aggregate many hundreds if not thousands. On May 23rd, 1925, we estimated the ground covered by a single flock of Grey Plovers, Knots and a sprinkling of Golden Plovers, at about one acre and a half. They were not scattered, but neither were they closely packed. The Greys made up about 75 per cent. of the whole. The sitting flock looked like a large patch of snow. It was a wonderful sight and on a wonderful day, for nearly all other waders seemed to be there in the same proportions. Could we but have counted them, I should not have been surprised to learn that we several times that day had more than 20,000 shore birds in view at once.

The Grey Plover has one habit that seems to be peculiar to it, and I fail to recall any published records of it. It persistently stands on one leg only, so much so, that every bird in a flock may appear to be one-legged. This is of course well known. But if one approach such a group slowly so as not to alarm them unduly, the birds gradually move away, but not one will trouble to unfurl the spare leg. Every bird hops away as though it owned but one. If one now suddenly strides forward, all the apparently superfluous legs speedily make their appearance, the birds take their characteristic runs preparatory to taking flight, and off they go.

This species has quite a variety of calls, the most constant being the alarm



pee-u-wee,

loud and ringing.

RECOVERY OF MARKED BIRDS.

- JACKDAW (*Colæus m. spermologus*).—66,192, ringed at Rusland, Ulverston, Lancashire, as a nestling, by Mr. C. F. Archibald, on May 29th, 1924. Reported near where ringed, in February, 1926, by Mr. H. Brocklebank.
- MAGPIE (*Pica p. pica*).—72,950, ringed near Buxton, Derbyshire, as a nestling, by Mr. A. W. Boyd, on June 11th, 1925. Reported near where ringed, in October, 1925, by Mr. G. T. Bratby.
- JAY (*Garrulus g. rufitergum*).—71,596, ringed at Linton, Kent, as a nestling, by Mr. W. Wood, on June 3rd, 1925. Reported near Maidstone, on November 28th, 1925, by Mr. G. C. Devas.
- STARLING (*Sturnus v. vulgaris*).—Z.2,949, ringed near Worthing, Sussex, as a nestling, by Miss Collins (for Lon. Nat. Hist. Soc.), on May 12th, 1924. Reported near where ringed on February 3rd, 1926, by Mr. H. R. Gatenby.
- 56,123, ringed at Cheadle, Staffordshire, as a nestling, by Mr. J. R. B. Masefield, on May 23rd, 1924. Reported at Spondon, Derbyshire, on January 10th, 1926, by Mr. J. Roberts.
- Z.1,149, ringed at Kinlune, Kingoldrum, Forfarshire, as a nestling, by Dr. J. N. D. and Mr. T. L. Smith, on June 11th, 1924. Reported near Blairgowrie, Perthshire, on February 17th, 1926, by Mr. C. Low.
- Y.7,975, ringed on Scone Estate, Perth, as a nestling, by Lord Scone, on May 16th, 1925. Reported in same building where ringed on March 13th, 1926, by the ringer. Again released.
- Z.2,795, ringed near Leamington, Warwickshire, as an adult, by Mr. P. K. Chance, on January 12th, 1925. Reported where ringed, early December, 1925, by Mr. A. E. Timms.
- Y.8,816, ringed near Welton, Cumberland, as a nestling, by Mr. R. H. Brown, on May 29th, 1925. Reported near Lisburn, co. Down, Ireland, on December 26th, 1925, by Mr. J. G. Tease.
- 57,675, ringed near Great Budworth, Cheshire, as a nestling, by Mr. A. W. Boyd, on July 10th, 1923. Reported where ringed on March 26th, 1924, by the ringer, and near where ringed on April 10th, 1925, by Mr. D. Boumphrey, per the ringer.
- Z.2,112, ringed as 57,675, on May 17th, 1924. Reported where ringed, on August 2nd, 1925, by the ringer. Again released.
- Y.1,553, ringed as 57,675, as a young bird, on July 30th, 1924. Reported near Warrington, Lancashire, on December 22nd, 1925, by Mrs. P. Skelton.
- Y.5,151, ringed as 56,765, on May 14th, 1925. Reported where ringed, on November 11th, 1925, by the ringer. Again released.
- GREENFINCH (*Chloris ch. chloris*).—Following ringed near Gt. Budworth, Cheshire, as adults, by Mr. A. W. Boyd, were reported by him where ringed and again released.
- | No. | Date Ringed | Dates Reported. |
|-------------|-------------------|---|
| A.9,321 ... | Feb. 18, 1924 ... | Twice Mar., 1924 ; Nov. 22nd, 1925. |
| A.9,343 ... | Feb. 24, 1924 ... | Feb. 22, 1926. |
| A.9,349 ... | Feb. 27, 1924 ... | Jan. 1, 1926. |
| A.9,360 ... | Feb. 28, 1924 ... | Nov. 22, 1925. |
| B.3,699 ... | Jan. 11, 1925 ... | Twice Feb., 1925, three times Jan., 1926. |

No.	Date Ringed.	Dates Reported.
B.9,045 ...	Jan. 25, 1925 ...	Feb., Mar., Nov., 1925; Feb., 1926.
B.9,109 ...	Feb. 26, 1925 ...	Dec. 13, 1925.
B.9,124 ...	Mar. 1, 1925 ...	Jan. 13, 1926.
B.9,126 ...	Mar. 1, 1925 ...	Jan. 14, 1926.
B.9,153 ...	Mar. 7, 1925 ...	Nov. 22, 1925.
B.9,156 ...	Mar. 7, 1925 ...	Jan. 13, 1926.

B.9,136, ringed near Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on March 3rd, 1925. Reported at Selby, Yorkshire, on December 5th, 1925, by Mr. Squirer.

B.9,134, ringed as B.9,136. Reported at Langford Farm, Lostock Graham, Cheshire, on December 16th, 1925, by Mr. J. W. Kennerley per the Editor of *Cage Birds*.

LINNET (*Carduelis c. cannabina*).—B.7,145, ringed at Eton, Buckinghamshire, as a nestling, by Mr. A. Mayall, on June 6th, 1924. Reported at Ventnor, Isle of Wight, on January 16th, 1926, by Mr. E. E. Jury.

8,014, ringed near Worthing, Sussex, as a nestling, by Miss Collins (for Lon. Nat. Hist. Soc.), on June 5th, 1925. Reported at Villeneuve de Marsan (Landes), France, in December, 1925, by Mlle. Darricau.

CHAFFINCH (*Fringilla c. cœlebs*).—A.2,004, ringed at Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on February 1st, 1923. Reported where ringed, in August, 1924, and April, 1926, by the ringer. Again released.

A.2,043, ringed as A.2,004, on March 8th, 1923. Reported where ringed, in March and December, 1923, January, 1924, February and December, 1925, and January, 1926, by the ringer. Again released.

A.9,289, ringed as A.2,004, on January 9th, 1924. Reported at Parbold, Lancashire, in November, 1924, by Mr. R. Glover.

A.9,345, ringed as A.2,004, on February 24th, 1924. Reported where ringed, on November 15th, 1925, by the ringer. Again released.

TREE-SPARROW (*Passer m. montanus*).—C.5,616, ringed near Gt. Budworth, Cheshire, as a nestling, by Mr. A. W. Boyd, on June 14th, 1925. Reported where ringed on April 25th, 1926, by the ringer. Again released.

YELLOW BUNTING (*Emberiza c. citrinella*).—Following ringed near Gt. Budworth, Cheshire, as adults, by Mr. A. W. Boyd, were reported by him where ringed and again released.

No.	Date Ringed.	Dates Reported.
B.9,079 ...	Feb. 19, 1925 ...	Jan. 15, 1926.
C.5,697 ...	June 25, 1925 ...	Jan. 29, 1926.
C.5,722, ...	July 4, 1925 ...	Dec. 19, 1925.
C.5,752 ...	July 9, 1925. ...	Feb. 9 and May 14, 1926.
C.5,784 ...	July 22, 1925 ...	Jan. 24, 1926.

MEADOW-PIBIT (*Anthus pratensis*).—C.6,442, ringed at Penybont, Radnorshire, as a nestling, by Mr. P. E. A. Morshead, on May 16th, 1925. Reported at Armamar, (Beira), Portugal, on January 23rd, 1926, by Senhor Carlos Gaspar. Published in *O Seculo*, January 29th, 1926.

PIED WAGTAIL (*Motacilla a. yarrellii*).—A.9,720, ringed at Streatly, Berkshire, as a nestling, by Dr. N. H. Joy, on June 24th, 1923. Reported at Welwyn, Hertfordshire, late January, 1926, by Mr. C. Butterfield per the Editor of *Cage Birds*.

C.7,565, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 29th, 1925. Reported at Scotstownhill, Glasgow, on April 12th, 1926, by Mr. J. Paterson.

C.9,622, ringed at Carlisle, Cumberland, as a nestling, by Mr. R. H. Brown, on June 16th, 1925. Reported where ringed, on December 2nd, 1925, by Mr. J. Thomson.

SONG-THRUSH (*Turdus ph. clarkei*).—7,260, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on April 30th, 1923. Reported near Athlone, co. West Meath, Ireland, on December 2nd, 1925, by Mr. T. A. Hussey.

Y.1,897, ringed at Bridge of Earn, Perthshire, as a young bird, by Mr. A. H. R. Wilson, on July 3rd, 1924. Reported at Athlone, co. West Meath, Ireland, on December 26th, 1925, by Mrs. Concannon.

59,158, ringed at St. Andrews, Fife, as a young bird, by Mr. A. H. R. Wilson, on May 1st, 1923. Reported at Ballina, co. Mayo, Ireland, early in February, 1926, by Mr. Walsh.

Z.3,487, ringed on Scone Estate, Perth, as a nestling, by Lord Scone, on May 8th, 1924. Reported at Dundee, Forfarshire, on December 24th, 1925, by Mr. C. S. Knight.

Y.2,436, ringed as Z. 3,487, on April 29th, 1925. Reported near where ringed, on June 22nd, 1925, by Mr. G. Veitch per the ringer.

Y.9,813, ringed at Pyrford, Surrey, as an adult, by Mrs. L. E. Taylor, on July 13th, 1925. Reported at Arromanches-les-Bains (Calvados), France, on December 3rd, 1925, by Mons. M. Senente.

Z.8,296, ringed as Y.9,813, as a nestling, on May 28th, 1924. Reported near where ringed, early in February, 1926 by the ringer.

Y.5,972 and Y.5,669, ringed at Nether Welton, Cumberland, as nestlings, on April 26th, 1925. Rings only found in nest-hole of Tawny Owl near where ringed, in April, 1926, by the ringer.

Z.1,185, ringed at Malvern, Worcestershire, as an adult, by Mr. P. E. A. Morshead, on November 12th, 1923. Reported where ringed, on December 21st, 1925, by the ringer. Again released.

Z.3,381, ringed at Hemsby, Norfolk, as a young bird, by Miss J. M. Ferrier, on April 20th, 1924. Reported where ringed, on January 15th, 1926, by Mrs. Rudd per the ringer.

Z.3,153, ringed at Burnham, Buckinghamshire, as a nestling, by Mr. A. Myall, on April 22nd, 1924. Reported at Crondall, Hampshire, on November 14th, 1925, by Mr. A. Saint.

Z.2,155, ringed near Gt. Budworth, Cheshire, as a nestling, by Mr. A. W. Boyd, on June 6th, 1924. Reported near where ringed, on December 26th, 1925, by Mr. A. Wilkinson.

55,238, ringed at Maidstone, Kent, as an adult, by Mr. W. Wood, on July 5th, 1925. Reported where ringed, in December, 1925, by the Rev. C. S. T. Watkins.

BLACKBIRD (*Turdus m. merula*).—A.5,482, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 9th, 1923. Reported at Torrance of Campsie, in December, 1925, by Mr. J. Rennox.

Z.4,481, ringed at Helensburgh, Dumbartonshire, as a nestling, by Mr. T. Kerr, on May 25th, 1924. Reported where ringed, on April 3rd, 1926, by Mr. R. Anderson.

Z.4,186, ringed at Arbroath, Forfarshire, as a young bird, by Mr. H. G. Watson, on May 26th, 1924. Reported where ringed, in February, 1926, by Mr. J. Liveston.

Z.1,139, ringed at Broughty Ferry, Forfarshire, as an adult, by Dr. J. N. D. and Mr. T. L. Smith, on November 2nd, 1924. Reported near where ringed, on June 24th and July 1st, 1925, by the ringer.

Z.7,618, ringed at Aberargie, Perthshire, as a young bird, by Mr. A. H. R. Wilson, on May 23rd, 1924. Reported near where ringed, on December 24th, 1925, by Mr. G. Duncan.

56,041, ringed at Cheadle, Staffordshire, as a young bird, by Mr. J. R. B. Masefield, on July 19th, 1922. Reported where ringed, on December 20th, 1925, by the ringer. Again released.

Z.3,558, ringed at Malvern, Worcestershire, as a nestling, by Mr. P. E. A. Morshead, on May 14th, 1924. Reported where ringed, on February 19th, 1926, by Mr. G. Frost.

57,759, ringed at Ingatestone, Essex, as a young bird, by Mr. B. Clarke, on April 25th, 1923. Reported where ringed, on October 5th, 1925, by the ringer.

Z.8,312, ringed near Horsley, Surrey, as a nestling, by Mrs. L. E. Taylor, on June 3rd, 1924. Reported at East Clandon, Surrey, in December, 1925, by Mr. B. Rhodes.

Following ringed near Gt. Budworth, Cheshire, as adults, by Mr. A. W. Boyd, were reported by him where ringed and again released:—

No.	Date Ringed.	Dates Reported.
57,683 ...	Nov. 28, 1923 ...	Jan. and Mar., 1924; Nov. and Dec., 1925.
57,688 ...	Dec. 4, 1923 ...	Dec., 1923, Mar., 1924, Nov. and Dec., 1925, Jan. 1926.
57,711 ...	Feb. 19, 1924 ...	Nov. 13th and 22nd, 1925.
57,732 ...	Mar. 2, 1924 ...	Dec. 5, 1925.
Y.2,008 ...	Dec. 22, 1924 ...	Nov. 19, 1925.
Y.2,009 ...	Jan. 6, 1925 ...	Dec. 3, 1925.
Y.2,012 ...	Mar. 8, 1925 ...	Nov. and Dec., 1925.
Y.5,242 ...	May 28, 1925 ...	Dec. 1, 1925.

WHINCHAT (*Saxicola r. rubetra*).—MW.20, ringed at Dalston, Cumberland, as a nestling, by Mr. R. H. Brown, on July 20th, 1925. Reported at Cunha Baixa (Mangualde), Portugal, on October 7th, 1925, by Mr. W. C. Tait. Published in *O Seculo*, October 9th, 1925.

REDBREAST (*Erithacus rubecula*).—A.7,271, ringed at Broughty Ferry, Forfarshire, as an adult, by Dr. J. N. D. and Mr. T. L. Smith, on December 24th, 1923. Reported where ringed twice in December, 1924, by the ringer.

A.7,280, ringed as A.7,271, on December 31st, 1923. Reported where ringed four times in March, 1925, by the ringer. Again released.

D.3,861, ringed at Kinclune, Kingoldrum, Forfarshire, as an adult, by Dr. J. N. D. and Mr. T. L. Smith, on February 9th, 1925. Reported where ringed, on October 8th, 1925, by the ringer. Again released.

B.9,835, ringed at Abernethy, Perthshire, as a young bird, by Mr. A. H. R. Wilson, on May 1st, 1925. Reported at Arbroath,

Forfarshire, on November 11th, 1925, by Mr. W. Ingram Tucker. C.2,131, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, in May, 1925. Reported where ringed, on November 26th, 1925, by Mr. J. F. Bowerbank, per the ringer. B.3,930, ringed near Sidmouth, Devonshire, as an adult, by Mr. P. E. A. Morshead, on December 25th, 1924. Reported where ringed, in January, September and December, 1925, by the ringer. Again released.

C.1,123, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on January 9th, 1925. Reported where ringed, on January 20th, 1926, by the ringer. Again released.

C.1,126, ringed as C.1,123, on January 14th, 1925. Reported where ringed, in January and February, 1926, by the ringer.

C.9,060, ringed as C.1,123, on June 13th, 1925. Reported near where ringed, on December 1st, 1925, by Mr. T. G. Woods.

C.6,668, ringed as C.1,123, on August 10th, 1925. Reported where ringed ten times between August 10th, 1925, and January 20th, 1926, by the ringer. Again released.

Following ringed near Gt. Budworth, Cheshire, as adults, by Mr. A. W. Boyd, where reported by him where ringed and again released:—

No.	Date Ringed.	Dates Recovered.
A.2,003 ...	Jan. 27, 1923 ...	Feb. and Mar., 1924; Nov. and Dec., 1925.
B.3,609 ...	Aug. 16, 1924 ...	Oct. 1924; Mar., Nov. (5 times), Dec., 1925.
B.3,632 ...	Aug. 21, 1924 ...	Twice Sept., twice Oct., 1924; once Oct., twice Nov., 1925.
B.3,689 ...	Nov. 20, 1924 ...	Jan., Feb., Nov. (twice), Dec., 1925.
B.3,691 ...	Dec. 11, 1924 ...	Thrice Dec., 1925.
B.9,196 ...	April 25, 1925 ...	Dec. 3, 1925.
C.6,555 ...	Aug. 15, 1925 ...	Nov. 14, 1925; Mar. 15, 1926.

HEDGE-SPARROW (*Prunella modularis*).—Following ringed at Broughty Ferry, Forfarshire, as adults by Dr. J. N. D. and Mr. T. L. Smith, were reported where ringed and again released:—

No.	Date Ringed.	Dates Reported.
QY.46 ...	Nov. 13, 1921 ...	April 22, 1923; Feb. 14, 1925 (re-ringed with A.7,295).
QY.56 ...	Dec. 27, 1921 ...	Dec. 24, 1923; Oct. 1, 1925 (re-ringed with A.7,272).
QY.59 ...	Jan. 2, 1922 ...	Oct. 2, 1925 (re-ringed with D.3,844).
5,731 ...	Nov. 6, 1922 ...	Dec. 26, 1923; Feb. 2, 1925 (re-ringed with A.7,274).
A. 7,267 ...	Dec. 23, 1923 ...	Feb. 22, 1925.

Following ringed near Gt. Budworth, Cheshire, as adults, by Mr. A. W. Boyd, were reported by him where ringed and again released.

No.	Date Ringed.	Dates Reported.
A.2,053 ...	Mar. 12, 1923 ...	Twice Nov., once Dec. 1924; once Jan., twice Dec., 1925; April 17 and May 5, 1926.

No.		Date Ringed.		Dates Reported.
B.3,612	...	Aug. 17, 1924	...	Oct. 3, 1925; Jan. 15, 1926.
B.3,692	...	Dec. 14, 1924	...	Mar. 4, 1926.
D.3,214	...	Sept. 29, 1925	...	Nov. 12, 1925; twice Mar., 1926.
D.3,218	...	Oct. 1, 1925	...	Nine times between Oct. and Dec., 1925; Feb. 27 and Mar. 7, 1926.

B.9,193 and B.9,198, ringed near Gt. Budworth, Cheshire, as nestlings, by Mr. A. W. Boyd, on April 24th and 30th, 1925. Reported near Warrington, Lancashire, on January 4th, 1926, and Oct. 17th, 1925, by the Editor of *Shooting Times*, and Mr. J. Whalley.

A.5,853, ringed at Bridge of Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on October 16th, 1923. Reported where ringed, on April 15th, 1925, by the ringer.

B.2,597, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 10th, 1924. Reported where ringed, on December 1st, 1925, by the ringer. Again released.

C.1,136, ringed as B.2,597, on March 24th, 1925. Reported where ringed, on November 7th, 1925, by the ringer.

B.5,650, ringed at Gill, Dalston, Cumberland, as a nestling, by Mr. R. H. Brown, on May 11th, 1924. Reported where ringed, on November 18th, 1925, by Mr. H. W. Sheehan.

SWIFT (*Apus a. apus*).—C.3,336, ringed near Tisbury, Wiltshire, as an adult, by Dr. N. H. Joy, on July 30th, 1924. Reported where ringed, in May, 1925, by Mr. Reed per the ringer.

CUCKOO (*Cuculus c. canorus*).—77,036, ringed at New Cumnock, Ayrshire, as a young bird, just out of a Meadow-Pipit's nest, by Mr. T. K. Craven, on July 7th, 1925. Reported at Menteroda, Muhlhausen, Thuringen, Germany, on August 2nd, 1925, by Herr A. Fahlbusch per Dr. Ernst Hartert.

TAWNY OWL (*Strix a. sylvatica*).—23,384, ringed at Willenhall, near Coventry, as a nestling, by Mr. F. Dipple, on May 3rd, 1925. Reported near Brandon Hall, Coventry, late in January, 1926, by Capt. D. Beech.

25,777, ringed at Holt, Norfolk, as a young bird, by Mr. R. G. Willan, on May 17th, 1925. Reported near where ringed, on November 3rd, 1925, by Mr. R. Ashby, per the ringer. Again released.

BARN-OWL (*Tyto a. alba*).—23,388, ringed near Coventry, as a nestling, by Mr. F. Dipple, on August 23rd, 1925. Reported at Bulwell, Nottinghamshire, on October 24th, 1925, by Mr. A. W. Hemington.

MERLIN (*Falco c. aesalon*).—72,938, ringed at Blackstone Edge, Lancashire, as a nestling, by Mr. F. Taylor (for Mr. A. W. Boyd), on July 27th, 1924. Reported on a Yorkshire Grouse moor late in November, 1925, by Mr. G. S. Robinson.

KESTREL (*Falco t. tinnunculus*).—77,037, ringed at Kirkconnel, Dumfriesshire, as a young bird, by Mr. T. K. Craven, on July 9th, 1925. Reported at Waldron, Sussex, on October 27th, 1925, by Mr. L. Leeves.

SPARROW-HAWK (*Accipiter n. nisus*).—77,839, ringed at Welton, Cumberland, as a nestling, by Mr. R. H. Brown, on July 3rd, 1925. Reported at Wigton, Cumberland, on December 2nd, 1925, by Mr. W. Hope, Jnr.

78,093, ringed at Curthwaite, Cumberland, as a nestling, by Mr.

R. H. Brown, on July 16th, 1925. Reported at Carlisle, Cumberland, on December 30th, 1925, by Mr. I. Harris.

78,092, ringed as 78,093. Reported near Carlisle, Cumberland, late in March, 1926, by Mr. J. Bowman.

78,182, ringed at Comberton, Cambridgeshire, as a young bird, by Mr. G. W. Thompson, on July 25th, 1925. Reported near where ringed, on December 21st, 1925, by Mr. A. E. Croot, per the ringer.

78,193, ringed as 78,182. Reported at Baldcock, Hertfordshire, on March 27th, 1926, by Mr. A. Cross.

HERON (*Ardea c. cinerea*).—19, ringed near Cheadle, Staffordshire, as a young bird, by Mr. J. R. B. Masefield, on May 28th, 1910. Reported on Gun Moor, Staffordshire, on February 27th, 1926, by Mr. W. A. Romanis, per Mr. R. E. Knowles.

MALLARD (*Anas p. platyrhynchos*).—Fifty-seven hand-reared birds, ringed at Oakmere, Cheshire, by Mr. A. W. Boyd, on July 17th, 1924. Fifty-three reported where ringed, in December, 1924, and four in December, 1925, by the ringer. Six ringed on August 4th, 1925. Reported where ringed in December, 1925. 22,393, (hand-reared) ringed at Cogshall, near Northwich, Cheshire, by Mr. A. W. Boyd, on August 8th, 1923. Reported near where ringed, in December 1925, by Mr. Harrison, per the ringer.

20,540, ringed at Leswalt, Stranraer, Wigtownshire, as an adult, by Mr. M. Portal, on March 4th, 1922. Reported where ringed, on November 17th, 1925, by the ringer.

25,456, ringed at Lynedoch, Almondbank, Perthshire, as a young bird, by Mr. H. Zimmerman (for Lord Scone), on August 4th, 1925. Reported at Fyvie, Aberdeenshire, on December 25th, 1925, by Mr. E. B. Lee.

TEAL (*Anas c. crecca*).—70,730, ringed at Cotter Fell, Wensleydale, Yorkshire, as a young bird, by Mr. R. M. Garnett, on August 19th, 1924. Reported near Lough Ree, co. Roscommon, Ireland, on December 6th, 1925, by the Rev. T. P. Hurley, per the ringer.

71,543, 71,666, 71,683 (hand-reared), ringed at Netherby, Longtown, Cumberland, by Mr. W. Bell (for Sir Richard Graham), on March 31st, 1923. Reported where ringed, two on November 14th, and one on December 18th, 1925, by the ringer.

71,689, ringed as 71,543. Reported near Lake Wener, Sweden, in April, 1925, by Dr. R. Soderberg.

76,170, ringed as 71,543, on March 3rd, 1925. Reported at Crewkerne, Somerset, on January 21st, 1926, by Lieut.-Com. H. B. Mitchell, R.N.

76,163, ringed as 71,543, on March 3rd, 1925. Reported at "South Slob Lands," co. Wexford, Ireland, on January 24th, 1926, by Mr. G. B. Cooke.

76,237, ringed as 71,543, on March 20th, 1925. Reported near Berek-sur-Mer (Pas de Calais), France, on October 31st, 1925, by Mons. Boucher.

76,385, ringed as 71,543, on April 1st, 1925. Reported where ringed, on November 14th, 1925, by the ringer.


CORMORANT (*Phalacrocorax c. carbo*).—101,802, ringed at Castle Loch, Mochrum, Wigtownshire, as a nestling, by Mr. J. G. Gordon, on June 14th, 1919. Reported at Cape Santa Maria (Algarve), Portugal, on January 19th, 1926, by Senhor E. C. Carroasco.

WOOD-PIGEON (*Columba p. palumbus*).—77,230, ringed near Andover, Hampshire, as a nestling, by Mr. P. K. Chance, on August 14th,


1925. Reported at Ripon, Yorkshire, on January 26th, 1926, by Mr. C. Julian.
- OYSTER-CATCHER (*Hæmatopus o. ostralegus*).—35,314, ringed at Ravenglass, Cumberland, as a young bird, by Mr. H. S. Greg, on June 22nd, 1925. Reported at Askam-in-Furness, Lancashire, on January 14th, 1926, by Mr. W. M. Stevenson.
- 25,997, ringed at Rockliffe Marsh, Cumberland, as a nestling, by Mr. R. H. Brown, on June 13th, 1925. Reported at Preston Mills, by Dumfries, on January 18th, 1926, by Mr. W. Butler.
- LAPWING (*Vanellus vanellus*).—95,987, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on June 4th, 1920. Reported on Loch Lomond, Dumbartonshire, in December, 1925, by Mr. J. Lennie.
- 55,282, ringed as 95,987, on June 19th, 1922. Reported at Newtownards, co. Down, Ireland, on December 2nd, 1925, by Mr. John McGouran.
- 58,880, ringed as 95,987, on June 9th, 1923. Reported at Marvao, Spanish-Portuguese frontier, in December, 1925, by Mr. P. F. Leith.
- Z.4,974, ringed as 95,987, on June 17th, 1924. Reported on Skelmorlie Shore, Ayrshire, on December 19th, 1925, by Mr. M. Downie.
- Y.2,214, ringed as 95,987, on July 8th, 1924. Reported at Clonakilty, co. Cork, Ireland, on December 27th, 1925, by Miss U. McCarthy.
- Y.7,646, ringed as 95,987, at Balfron, Stirlingshire, on June 8th, 1925. Reported at Balbriggan, co. Dublin, Ireland, on December 11th, 1925, by Mrs. N. Yeates.
- Y.7,705, ringed as 95,987, at Strathblane, Stirlingshire, on June, 12th, 1925. Reported at Lambhill, Glasgow, end October, 1925, by Mr. John Aitkenhead.
- Z.4,976, ringed at Aberfoyle, Perthshire, as a young bird, by Mr. J. Bartholomew, on June 19th, 1924. Reported on River Lima, near Vianna do Castello, Portugal, on December 25th, 1925, by Senhor R. D. F. Ramos.
- Y.7,676, ringed as Z.4,976, on June 11th, 1925. Reported at Ballinasloe, co. Galway, Ireland, in January, 1926, by Mr. M. Tierney.
- 51,321, ringed near Kilmacolm, Renfrewshire, as a nestling, by Mr. and Mrs. R. O. Blyth, on June 21st, 1922. Reported near Portadown, co. Armagh, Ireland, on December 2nd, 1925, by Mr. T. G. Robinson, Jnr.
- Z.1,159, ringed at Glen Clova, Forfarshire, as a young bird, by Dr. J. N. D. and Mr. T. L. Smith, on June 25th, 1924. Reported at Bessbrook, co. Armagh, Ireland, on December 15th, 1925, by Mr. McClelland.
- Z.4,213, ringed near Arbroath, Forfarshire, as a young bird, by Mr. H. G. Watson, on June 7th, 1924. Reported at Ballybay, co. Monaghan, Ireland, on January 5th, 1926, by Mr. P. Duffy.
- Z.4,221, ringed as Z.4,213, on June 16th, 1924. Reported at Abernethy, Perthshire, in January, 1926, by Mr. W. Gay, Jnr.
- Z.1,621, ringed at Glen Fruin, Dumbartonshire, as a young bird, by Mr. T. Kerr, on May 13th, 1924. Reported where ringed, on March 25th, 1926, by Mr. D. McLeod.
- Z.7,719, ringed as Z.1,621, on June 22nd, 1924. Reported at Athy, co. Kildare, Ireland, in January, 1926, by Mr. P. Day.

- Y.2,165, and Y.2,172, ringed as Z.1,621, on May 19th, 1925. Reported near where ringed early in October and on December 24th, 1925, by Messrs. Macneur and Bryden and Mr. J. Graham.
- Y.8,072, ringed on Scone Estate, Perth, as a young bird, by Lord Scone, on June 19th, 1925. Reported at Ballykelly, co. Derry, North Ireland, in December, 1925, by Messrs. J. McCurry and Nevin H. Foster.
- Y.5,029, ringed at Kirkconnel, Dumfries-shire, as a young bird, by Mr. T. K. Craven, on June 28th, 1925. Reported near Oviedo, (Asturias), N. Spain, in February, 1926, by Senor Dr. Vincente Nuno.
- Y.8,448, ringed at St. Andrews, Fife, as a young bird, by Mr. A. H. R. Wilson, on May 29th, 1925. Reported near Barreiros (Leiria), Portugal, on December 8th, 1925, by Senhor V. P. Estrele d'Oliveira.
- C.1,517, ringed at Hareshawmuir, Ayrshire, as a young bird, by Mr. E. R. Paton, on May 18th, 1925. Reported on shore of the Clyde, Dumbarton, on November 12th, 1925, by Mr. L. M. Currie.
- Y.6,721, ringed at Alnwick, Northumberland, as a young bird, by Mr. H. Scott Plumer (for Lord Scone), on April 12th, 1925. Reported at Kelso, 30 miles in N.W. direction from where ringed, late in May, 1925, by the ringer.
- 22,345, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, in May, 1925. Reported at Bruff, co. Limerick, Ireland, on January 11th, 1926, by Mr. T. Suliffe.
- Y.9,991, ringed near Gill, Dalston, Cumberland, as a young bird, by Mr. R. H. Brown, on June 25th, 1925. Reported at Mallow, co. Cork, Ireland, in February, 1926, by Mr. A. Kiely.
- 51,126, ringed at Cley, Norfolk, as a nestling, by Mr. A. W. Boyd, on June 10th, 1922. Reported at Kelling, near Holt, Norfolk, on October 25th, 1925, by Mr. Wm. Dewing.
- Z.2,166, ringed as 51,126, on June 8th, 1925. Reported where ringed, on November 28th, 1925, by Mr. C. M. Skerrett Rogers.
- REDSHANK (*Tringa t. totanus*).—Y.7,662, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on June 9th, 1925. Reported at Lytham, Lancashire, on October 31st, 1925, by Mr. J. S. Mayor.
- SNIFE (*Capella g. gallinago*).—Y.3,607, ringed at Nether Wyresdale, N. Lancashire, as a young bird, by Mr. H. W. Robinson, on May 25th, 1925. Reported in east Limerick, Ireland, on January 6th, 1926, by Mr. C. Ryan.
- Y.1,013, ringed at N. Hareshaw, Ayrshire, as a young bird, by Mr. E. R. Paton, in July, 1924. Reported at Rowallan, Kilmar-nock, Ayrshire, on November 12th, 1925, by Mr. G. Corbett.
- WOODCOCK (*Scolopax r. rusticola*).—Z.3,740, ringed at Baronscourt, co. Tyrone, Ireland, as a young bird, by Mr. R. Taylor, on May 12th, 1924. Reported where ringed, on December 5th, 1925, by the Marquis of Hamilton, per the ringer.
- Z.1,513, ringed at Balgowan, Perthshire, as a young bird, by Mr. A. H. R. Wilson, on May 21st, 1924. Reported near Charleston, Queenstown, co. Cork, Ireland, on December 1st, 1925, by Mr. H. S. Tarrant.
- Y.2,314, ringed at Lynedoch, Almondbank, Perthshire, as a nestling, by Mr. H. Zimmerman (for Lord Scone), on May 7th, 1925. Reported at Rush, co. Dublin, Ireland, on January 6th, 1926, by Mr. W. Rollison.

- Z.1,233, ringed at Comrie, Perthshire, as a young bird, by Col. P. C. Macfarlane, on July 2nd, 1923. Reported at Rozelle, Ayrshire, on October 17th, 1925, by Col. C. H. Hamilton.
- Z.6,111, ringed near Drymen, Glasgow, as a nestling, by Mr. R. A. Stewart, on April 27th, 1925. Reported at Rutherford, West Linton, Peebles-shire, on November 10th, 1925, by Dr. G. Mackay.
- I.472, ringed at Lann, Dumfries-shire, as a young bird, by Mr. J. Murray (for Mr. H. S. Gladstone), in spring, 1922. Reported in Parish of Glencairn, Dumfries-shire, on November 19th, 1925, by Col. Sir J. Laurie, Bt.
- Y.5,755, ringed at Holstane, Dumfries-shire, as a young bird, by Mr. J. Currie (for Mr. H. S. Gladstone), on April 30th, 1925. Reported on Buteland Farm, near Bellingham, Northumberland, on January 28th, 1926, by Mr. T. Welch.
- 70,174, ringed near Caton, Lancaster, as a young bird, by Mr. E. Broomfield (for Mr. H. S. Greg), on June 27th, 1923. Reported at Wray, near Hornby, Lancaster, on January 9th, 1926, by Mr. L. A. Smith.
- Z.3,070, ringed at Holker, Cark-in-Cartmel, Lancashire, as a young bird, for Col. Porritt, in May, 1925. Reported at Broughton-in-Furness, Lancashire, on December 19th, 1925, by Mr. R. Fawcett.
- SANDWICH TERN (*Sterna s. sandvicensis*).—Z.7,341, ringed at Walney Island, N. Lancashire, as a young bird, by Mr. H. W. Robinson, in June, 1924. Reported near where ringed, on August 25th, 1925, by Mr. J. Fletcher, Jnr.
- LESSER BLACK-BACKED GULL (*Larus f. affinis*).—26,238, ringed at Bowness Moss, Cumberland, as a young bird, by Mr. R. H. Brown, on July 14th, 1925. Reported at Alhos Vedros, near Lisbon, Portugal, on November 19th, 1925, by Mr. W. C. Tait. Published in *Noticias*.
- 24,604, ringed at The Gugh, Isles of Scilly, Cornwall, as a young bird, by Mr. H. W. Robinson, on July 2nd, 1925. Reported at Ploudalmezeau (Finistère), France, on September 17th, 1925, by Mons. T. Rapine.
- GUILLEMOT (*Uria a. albionis*).—21,458, ringed on Handa Island, Sutherland, as an adult, by Mr. A. W. Boyd, on June 29th, 1923. Reported in Oslo Fjord, Norway, on December 31st, 1925, by Mr. L. R. Natvig.



NOTES



STARLINGS ATTACKING SWIFTS.

UNDER the thatch of many of the cottages near Felsted School, Swifts (*Apus a. apus*) have nested for many years. One of a pair of such cottages, at French's Green, has been occupied by the same labourer for more than twenty years and he is rather proud of the fact that quite a number of Swifts have nested there annually. One evening he heard a great screeching outside his window and rushed out to find that a Starling had got a Swift on the ground and was pecking it unmercifully. He picked the Swift up and threw it in the air after he had rested it a bit and smoothed the plumage. Another day the same thing happened but his cat got to the Swift first and made off with it, taking no notice of the Starling. Another evening he found where the cat had just devoured another. On June 5th he reckoned that only two pairs of Swifts remained out of the usual six or more. Both Starlings and Swifts nest so far up under the thatch that it is impossible to remove the Starling broods before the Swifts need possession.

J. H. OWEN.

[Where there is keen competition for nesting sites between Swifts and Starlings I have known two birds to come to the ground locked together, and had some difficulty in disentangling their claws. As in the case recorded by Mr. Owen, the Starling generally has the advantage.—F.C.R.J.]

CROSSBILLS NESTING IN SURREY.

As there do not appear to be many records of the Crossbill (*Loxia c. curvirostra*) breeding in Surrey, it may be of interest to record that they bred in a certain district of that county this year (1926). They were rather late—still building on March 20th—and unusually shy. We saw two nests on that date and there were other pairs of birds about.

C. W. MACKWORTH-PRAED.

WOOD-LARK BREEDING IN SURREY.

I AM pleased to be able to record a satisfactory increase in the small colony of Wood-Larks in east Surrey, referred to by me in Vol. XVIII., p. 192. In 1925, I know that at least eight pairs reared one, and probably more, broods. On May 30th, three males were singing in the air at once. From the lateness

of dates several nests must have been second or even third layings: thus, on June 2nd I flushed a bird off five fresh eggs, on June 20th another was sitting on four fresh eggs, while on July 29th a pair of birds were carrying food to young, but the nest was not found. One nest, on May 30th, in the side of a bank under a canopy of heather, was composed of a broad-leaved couch grass and lined with hay; the one on June 2nd was in the open amongst seedling birches, and was built of hay and lined with hair; another, on June 20th, was composed of the empty, feathery, seed-capsules of rosebay (*Epilobium angustifolium*) and lined with hay.

C. W. COLTHRUP.

GREY WAGTAIL NESTING IN BERKSHIRE.

FROM the end of March to the middle of May, 1926, I observed Grey Wagtails (*Motacilla c. cinerea*) by the Embrook in Berkshire. A nest was built on a ledge almost touching a mill-wheel, but the birds deserted after two eggs were laid, probably owing to the wheel being put into motion. The birds were in the vicinity afterwards, at any rate for a short time.

JOHN N. FLETCHER.

[This bird now breeds regularly in Berkshire, *cf.* Brit. B., Vol. IX., p. 26, where H. M. Wallis states that about ten nesting sites are known.—F.C.R.J.]

UNUSUAL SITE OF TREE-CREEPER'S NEST.

A TREE-CREEPER (*Certhia f. britannica*) made its nest in the hay at the top of a hay-shed at Swanmore, Hampshire, behind one of the larch pillars. The nest was merely burrowed into the hay. Five young birds left it on May 18th, 1926. The parents collected much of their food from insect life found on the outside of the hay in the shed.

M. PORTAL.

GREAT AND BLUE TITMICE IN SKYE.

IN a *Practical Handbook of British Birds* I notice that the Great Titmouse (*Parus major*) is said to be only a rare visitor to Skye. It may be interesting therefore to record that I saw several in the Armadale Castle Woods on January 21st, 1926. With reference to the Blue Titmouse (*Parus cæruleus*), which is stated to be rare in Skye, I saw several in the trees at Broadford on January 23rd, and found them quite common in the trees by the side of a burn at Portree.

EVELYN V. BAXTER.

NEST OF MISTLE-THRUSH ON ROCK LEDGE.

ON May 13th, 1926, I found a nest of a Mistle-Thrush (*Turdus v. viscivorus*) in a very unusual situation—near Over Haddon, Derbyshire. It was built on a ledge of rock in a disused limestone quarry and contained four typical eggs. There are plenty of suitable trees near this quarry for a nest of this bird.

J. S. MACDONALD.

[F. B. Whitlock (*Birds of Derbyshire*, p. 24) states that in the High Peak nests are sometimes found on ledges of rock. The same habit has also been recorded in Yorkshire (*Nat.* 1889, p. 52, etc.; *Zool.* 1906, p. 111, etc.) and on sea cliffs in Wales (*Zool.* 1904, p. 15; 1905 p. 225, etc.).—F.C.R.J.]

BUZZARDS IN KENT IN SUMMER.

ON May 26th, 1925, I watched a Buzzard (*Buteo buteo*) sailing over Chartham, near Canterbury, travelling N.E. until it disappeared from sight.

On June 20th I saw another sailing over Hayes Common going N.E.

C. W. COLTHRUP.

BRENT GOOSE IN IRELAND AT END OF MAY.

ALONG with some other ornithologists I came on a Brent Goose (*Branta bernicla*) beside an islet in Lough Erne on May 25th, 1926. In the short time for observation through the glasses before flight, I did not notice any white mark on the neck, but otherwise the bird was quite clear, being less than 100 yards off. Its flight seemed perfect, but it did not appear to leave the vicinity.

J. P. BURKITT.

GREY PLOVER AND GARGANEY IN BERKSHIRE.

WHILE Mr. H. P. O. Cleave and I were watching birds at the Reading sewage farm, on the evening of May 25th, 1926, we saw a male Grey Plover (*Squatarola s. squatarola*) in full summer plumage. It was feeding with two Ringed Plovers and, although exceedingly shy, we managed to get within close range. This species has been observed at the farm before by Mr. Cleave and Dr. Joy, but only on the autumn migration. The day previous (May 24th) a very fine male Garganey (*Anas querquedula*) was seen by myself at the same place, but this disappeared within a few hours.

JOHN L. HAWKINS.

BREEDING OF THE COMMON CURLEW IN SURREY.

HAVING been informed by Mr. Gardham, of Staines, that when crossing a common in Surrey last year, 1925, his attention

had been attracted by the noisy demonstrations of a pair of Curlew (*Numenius a. arquata*), and that he had found two young ones crouching in the heather, I decided to visit the neighbourhood this spring. On April 18th, I was on the common for eight hours but did not see a bird, though I twice heard them calling from a distance. On May 22nd, I had a pair of birds under observation for over four hours and at length found their nest, on a dry ridge of high ground. It contained two chicks just free of the shell and two eggs, both chipped.

GRAHAM W. KERR.

[For previous records, see Vols. XII., p. 260 ; XIII., p. 230, and XVII., p. 205.—EDS.]

KITTIWAKES INLAND IN CHESHIRE.

THE Kittiwake (*Rissa t. tridactyla*) is so rarely seen inland in Cheshire that three recent occurrences are possibly worthy of record.

On March 18th, 1926, Mr. J. Moore identified an adult bird which the keeper had picked up dead a few days before at Marbury Mere, near Northwich. Mr. Moore tells me that it was in beautiful plumage, but emaciated, and thinks that the heavy gales prevailing about that time accounted for its presence inland.

On May 1st, Mr. G. A. Carver and I saw an immature bird flying over Marbury Mere and resting on the water and on a sandspit ; this bird gave no signs of weakness to suggest that it had been storm-driven. Many migrants were passing at the same time and among others we observed the first Black Tern (*Chlidonias n. niger*) and Little Tern (*Sterna a. albifrons*) seen this year. On June 2nd, I picked up on the bank of Oakmere, $7\frac{1}{2}$ miles distant from Marbury Mere, the remains of a third Kittiwake, an adult bird, which had obviously been lying there for a number of weeks.

A. W. BOYD.

CUCKOO RETURNING TO SAME SUMMER QUARTERS FOR AT LEAST SEVEN YEARS.—With reference to his former notes (Vol. XVI., p. 190 ; Vol. XVII., p. 23, and Vol. XVIII., p. 31), Mr. Thomas L. S. Dooly writes that the same Cuckoo (*Cuculus c. canorus*) has returned again to Formby, Lancs, this season, 1926, keeping to the same neighbourhood as usual.



WANTED.—Birds in variety plumage, or would purchase whole collection of such.

C. J. CARROLL, Rocklow, Fethard, Co. Tipperary.

LE GERFAUT

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FIELD-NOTES FROM GLAMORGAN. (III.)

BY

GEOFFREY C. S. INGRAM, M.B.O.U., AND H. MORREY
SALMON, M.C.

SINCE the publication of our second series of notes (Vol. XVIII), the following observations have been made:—

GOLDFINCH (*Carduelis carduelis* subsp?).—A flock of 25-30, an unusually large one for this district, was seen at the Llanishen Reservoirs, November 11th, 1925.

CHAFFINCH (*Fringilla c. cælebs*).—A pair built a nest inside a hide which we constructed at the top of a tree some 35 feet high in a local heronry, and reared a brood of five young, May, 1925.

BRAMBLING (*Fringilla montifringilla*).—A female was seen in the company of a few Chaffinches on Leckwith Common, January 16th, 1926.

HOUSE-SPARROW (*Passer d. domesticus*).—Two abnormally coloured birds, light french-grey, darker on the head, with normal eyes, but pale yellow beaks and flesh-coloured legs, were seen in Cardiff on June 18th, 1925, and on several subsequent occasions.

WHITE WAGTAIL (*Motacilla a. alba*).—One male, in company with two Pied Wagtails (*M. a. yarrellii*), was seen at Lisvane Reservoir, March 21st, 1926.

WAXWING (*Bombycilla garrulus*).—Mr. John Grimes, a careful local observer, reports seeing one near the Roath Park, Cardiff, on January 16th, 1926.

MARTIN (*Delichon u. urbica*).—As few records of the fledging-period of this species appear to have been made, the following may be of value:—The nest was under the gable of the house of one of the writers and on the day the young hatched, August 6th, 1925, the parents were unduly excited and the fresh half-shells of newly hatched eggs were picked up under the nest shortly after they had dropped. The young left on August 30th; this fact being detected by the absence of droppings below the nest (they had had to be washed away every day) and the disappearance of the birds. The period in this case is 24-25 days.

HOOPOE (*Upupa e. epops*).—One was observed near Penarth on April 4th and 5th, 1926, and reported to us by two different observers from points a mile apart.

BRITISH GREAT SPOTTED WOODPECKER (*Dryobates major anglicus*).—Is steadily increasing in our district and on May 10th, 1925, a nest was found in one of the public parks of

the city of Cardiff. It was in an alder growing at the edge of a much frequented path, the hole opening towards a small copse. Both parents were busy feeding the young on May 24th and 31st.

PEREGRINE FALCON (*Falco p. peregrinus*).—On December 12th, 1924, an immature bird was watched rounding up wild Duck, much as a sheep dog rounds up scattered flocks, without attempting to take any individual bird. We were walking along the shore of a lake on which very large numbers



GREAT SPOTTED WOODPECKER AT NEST-HOLE, WITH BEAK FULL OF BEETLE LARVAE, PROBABLY ONE OF THE LONGICORNS.

(Photographed by G. C. S. Ingram.)

of Wigeon, Teal, Mallard and Shoveler were swimming and feeding, and as we approached flocks rose and flew round overhead.

Suddenly they began to dash down to the water at a furious pace, and on looking for the cause we saw a Peregrine had appeared and was chasing them. It would circle round, single out a small party and dive at them at a tremendous rate, following them almost to the water and then throw up,

repeating its tactics until all the Duck had settled, then flying off to perch on a tall, dead tree on a hill overlooking the lake. We put up the Duck again and the Peregrine immediately left its tree, drove them down, and returned to its perch. Once again we roused the Duck, and once more the Peregrine rounded them up. Not once did it attempt to strike at a bird, though it could have killed time after time.



HERON SCRATCHING ITS HEAD.
(Photographed by H. M. Salmon.)

MERLIN (*Falco columbarius æsalon*).—Another new nesting site in the county was discovered by Mr. H. E. David on June 13th, 1925, the nest being in heather on top of a hill.

COMMON HERON (*Ardea c. cinerea*).—The pectinated middle claw of this bird is well known, and one use is

illustrated by the accompanying photograph, which was taken in a local heronry, April 12th, 1925.

One of the oldest of the four heronries in the county has now, unfortunately, been dispersed.

BEWICK'S SWAN (*Cygnus b. bewickii*).—Four adults on Kenfig Pool, November 14th and December 26th, 1925.

GREY LAG-GOOSE (*Anser anser*).—One, Kenfig Sands, December 26th, 1925.

WHITE-FRONTED GOOSE (*Anser albifrons*).—Numbers were seen in small groups of from three to eight on the Margam Moors, December 26th, 1925, and a flock of 50-60 feeding together on Flemingston Moors, March 6th, 1926.

GOLDENEYE (*Bucephala c. clangula*).—Has been seen in unusual numbers on the Llanishen Reservoirs from December 13th, 1925, to the end of March, 1926. Two adult males and one male in first summer plumage, with four females, were there from January 10th to 31st, 1926. The males remained until March 7th and were seen displaying on February 7th and 14th.

GOOSANDER (*Mergus m. merganser*).—One on Kenfig Pool, November 11th, 1925.

SLAVONIAN GREBE (*Podiceps auritus*).—Five on Llanishen Reservoir on February 8th, 1925. Representatives of all the Grebes on the British list have now been noted, during the past three years, on this sheet of water.

BLACK-NECKED GREBE (*Podiceps n. nigricollis*).—One on Lisvane Reservoir, December 28th, 1924, and one on Llanishen Reservoir, February 21st to 28th, 1926. This species has been a regular visitor each winter since first noted in 1921.

GREEN SANDPIPER (*Tringa ochropus*).—One at Llanishen Reservoir, December 6th, 1925.

LITTLE TERN (*Sterna a. albifrons*).—Is endeavouring to establish itself in a second site in the county. Three pairs were present on July 14th, 1925, two of which were seen feeding young.

LESSER BLACK-BACKED GULL (*Larus fuscus*).—Subsp. unidentified. One or more have been seen in each month, except December, from October, 1925, to March, 1926, on the Llanishen Reservoir.

GLAUCOUS GULL (*Larus hyperboreus*).—An adult seen for several hours on Llanishen Reservoir, January 14th, 1925.

SOUTHERN PUFFIN (*Fratercula arctica grabæ*).—Half a dozen pairs were back at their old breeding haunt in the county on June 21st, 1925, and were apparently feeding young.

SOME NOTES ON BIRD-SONG.

BY

THE REV. E. PEAKE.

ALL who are interested in bird-song must be grateful for Stanley Morris's little manual (*Bird-Song*) recently published. He speaks of his desire to throw more light on a subject which has hitherto received little attention. On the other hand, E. R. Hendy, writing in the *Nineteenth Century* for March, apologises for taking a subject on which so much has been written. The truth is, no considerable attempt has been made to deal with bird-song since Witchell's *Evolution of Bird-Song*, and yet anyone who is greedy to pick up anything written on the subject may collect a great deal of material, increasing in quantity and in quality almost daily, from the writings of Beebe, Patten, Beach-Thomas, Capt. Knight and other more or less well-known names, or from more casual and anonymous sources. In *British Birds*, Vol. IX., p. 230 (1916), Miss Haviland said, "I venture to think that an ordinary observer need have less diffidence in touching on the subject of bird-song than any other point of ornithology."

The writer ventures to offer a contribution culled from observations kept and noted during the last forty years. First, came about a dozen years at Giggleswick, in Yorkshire, then a similar period at Bradfield in Berkshire, again the same at Oxford, ending with five years in a large garden in Huntingdonshire. The Oxford notes were the product of a very regular survey of the Christ Church walks, a regular bird-sanctuary, especially frequented perhaps by such birds as the Tree-Creeper (*Certhia f. britannica*), Lesser Spotted Woodpecker (*Dryobates m. comminutus*), Nuthatch (*Sitta e. affinis*), and Redwing (*Turdus musicus*).

In the bibliography of the subject mention should be made of Mitchell's *Cries and Call-notes of Birds*, the *Bird Dictionary* by C. L. Hett of Brigg, and Dr. Walter Garstang's poetical presentations. German literature should be examined; a very useful effort is *Anleitung zur Studium des Vogelstimmen*, by Dr. Alwin Voigt of Leipsig (1892), which uses a system of dots and lines something like what Professor Rowan described in his paper in *British Birds*, June, 1924. A chapter in Warde Fowler's *Summer Studies of Birds and Books*, "On the Songs of Birds," is well worth notice.

The faculty of perceiving and analyzing bird-song grows unconsciously with practice and familiarity, and, like many matters of perception in nature, differs according to practice.

The Redstart (*Phœnicurus p. phœnicurus*) might seem to the beginner to have no song, but its little "hee-chit-chit" is a charming one, and I miss it badly in Huntingdonshire. John Burroughs wrote, "The ear hears best and easiest what it has heard before. Properly to apprehend and appreciate bird-songs, especially to disentangle them from the confused murmur of nature, requires more or less familiarity with them." Personally, I find Burroughs's remarks specially illuminating and helpful, about bird-singing in general and about individual birds. The circumstances and surroundings make a difference in the judgment of song. Varying conditions of resonance in particular affect it. It would seem also that resonance affects the quality of the song of birds themselves. Burroughs said, "Birds like a good auditorium, where their voices have room, and their songs reverberate." This seems the likeliest explanation of the unfinished quality of the song of the Chaffinch (*Fringilla c. cœlebs*) and the Yellowhammer (*Emberiza c. citrinella*) on the fen side of Huntingdonshire.

One cannot help being conscious of the absurdity of efforts to represent songs by words, and yet sometimes they may help to give an idea to someone else. The Song-Thrush (*Turdus ph. clarkei*) is easy, no doubt. John Burroughs gave, "Kiss her, kiss her, do it, do it; stick her to it, stick her to it, that was neat, that was neat, that will do." C. Oldham, in the *Practical Handbook*, quotes for the Chaffinch, "In another month will come a Wheatear." Other instances will occur in these notes.

The more experience one has, the more is one aware of the amount of small song, *sotto voce* singing, that goes on with many species. Gene Stratton Porter noted this of American birds, "Almost all birds sing whisper songs that must be for their own pleasure." She adds that this is much more common than is supposed (*Homing with the Birds*). All observers are, no doubt, aware of it in the case of the Lesser Whitethroat (*Sylvia c. curruca*). Those characteristic high-flown clattering notes that mark its song are preceded by little warblings, of which one is hardly conscious unless one is a still listener close at hand. Many are quick to recognize from afar the "twee, twee, twee," of the Tree-Pipit (*Anthus t. trivialis*) as it drops to the tree, but it has plenty of smaller song when heard close at hand. In the same way, the Common Whitethroat (*Sylvia c. communis*) is a much better warbler than its ordinary hurried hedge-row song would indicate. I have heard this bird at the end of June singing a tiny song from which it would

be hard to tell what bird was singing. The Blackcap (*Sylvia a. atricapilla*) indulges in all kinds of phrases, sometimes tiny chucklings and bubblings, before it flings out that loud, bright "hee-ti-weeto-weeto" at the finish; a Goldcrest's (*Regulus r. anglorum*) ordinary little song is very definite, but I have several times heard it make little tiny warblings which are quite unrelated to that song. A Chiffchaff (*Phylloscopus c. collybita*) does the same thing, and I do not agree with Stanley Morris as to its being a sign of going off its song. One hears it on its first arrival in early spring. On April 26th, 1921, I watched two males challenging each other and indulging in such phrases a good deal. I once heard a Mistle-Thrush (*Turdus v. viscivorus*) sing little Blackbirdy bits in between spurts of its usual loud song. Many, no doubt, have noticed the small song of a Song-Thrush sitting in a hedge in late autumn, but a charming experience is to hear a Redwing do the same. Blackbirds (*Turdus m. merula*) sing small, not infrequently, in such a way that one could not tell what the bird was without seeing it. I have heard it do so in December, January and in March. In the latter case the bird was courting; walking about under a thorn-tree with trailing tail and lowered head, the hen bird sitting stolidly in the tree. One might think a Wren (*Troglodytes t. troglodytes*) could not sing quietly, but once, on July 18th, I heard one sing a continuous little song like a Hedge-Sparrow's (*Prunella m. occidentalis*) with just a touch of Wren occasionally. One of the most beautiful of these small songs is that of the Dipper (*Cinclus c. gularis*), not uttered on the wing, but quietly from its perch by the water in late autumn.

A curious thing in bird-song is when birds which are not genuine night-singers burst into song in bright moonlight. I have heard the Blackbird sing thus at 3.15 a.m. in February, and in the early morning of September 26th. The Wood-Pigeon (*Columba p. palumbus*) often breaks out into his "You fool, you fool, you poor fool, you!" in the spring months, whether it is 11 p.m. or two o'clock in the morning. The Rev. F. C. R. Jourdain records the Song-Thrush singing by moonlight, and E. R. Hendy the Wren.

I have heard a Hedge-Sparrow in July at 10 p.m., and also while still dark between 3 and 4 in the morning. Once on April 3rd, at 10 p.m., a Hedge-Sparrow broke out into loud song when the pitchy darkness was suddenly illuminated by the lights of a motor.

I have heard a Starling (*Sturnus v. vulgaris*) sing under the eaves on October 3rd at 10 p.m., and a Starling in October,

at 9.45 p.m. on a dark night, sang away hard with its ordinary typical calls and clicks.

Bright moonlight also seems to act as a stimulant to birds with less mimical powers, for the Cuckoo (*Cuculus c. canorus*) will call under this condition and Snipe will drum for hours.

One hardly expects any other sound from the Jay (*Garrulus g. rufitergum*) than its rasping, far-sounding exclamation, though it has a reputation as an imitator, but one November afternoon, towards evening, I heard one utter a not unmusical "clink, clink, clink."

In the case of the Starling I noticed a considerable general difference in the every-day imitations between Yorkshire and Berkshire birds. In the former case, Lapwings (*Vanellus vanellus*), Curlews (*Numenius a. arquata*) and such birds of the open country and moors were the source, and in Berkshire, Owls and wood birds more. Among less usual imitations I have recorded the Guinea-Fowl and Black-headed Gull (*Larus r. ridibundus*). Is it pure fancy to suppose that in winter one may hear the imitation of songs heard out of England?

Mass singing is an interesting question. There must be few who have not noticed this feature with regard to Starlings. A whole flock bubbles with song, waves of sound increasing in intensity, and then perhaps ceasing abruptly to start again in a few minutes. The Redwings do this too, as I shall describe below. Linnets do it also, as well as Sparrows. In this case Tree-Sparrows (*Passer m. montanus*) are often the chief musicians I believe, but House-Sparrows (*P. d. domesticus*) also join. This does not refer to the excited chattering of a Sparrow "rag," but is a musical performance as in the case of the Starlings, and is performed not by one treeful of birds, but a whole orchard full.

I found a generic difference between Yorkshire and Berkshire Chaffinches which was hard to analyze, but I was inclined to think that the influence of Yellowhammers and other such birds, such as were absent or uncommon in Craven, gave more of a burr to the Berkshire birds. It affected the early part of the song. Now in Huntingdon, the Chaffinches, one and all, end the song badly. Dr. Walter Garstang's description of the song is good: "some plain notes, some trilled notes, a final bravado, 'Tell, Tell, Tell, cherry-erry-erry, Tissy-choo-éo.'" Many will remember Warde Fowler's comparison to the action of a bowler at cricket: two or three long strides, then some tripping steps, and a heave-over at the finish. Now this "final bravado," or "Wheatear" or

"British Museum" is quite missing in Huntingdon Chaffinches, on the fen side at any rate. In other localities, individual birds will occasionally drop it even when in full song. I once listened in the Christ Church walks to two Chaffinches singing one against the other. One suddenly dropped the ending, and the other did the same. There was one bird there which constantly sang "bravado" twice over. Seemingly, the weakness of the Huntingdon song must be due to the lack of numbers and of resonance. A local observer has told me of his astonishment when he first heard the fuller song elsewhere. The ending is evidently the triumph of the song. Listen to a Chaffinch practising in spring, and you will find, until he gets the balance of the first part well, he breaks down before the finish. He trips or stammers as it were. The first notes must be strongly hammered out. The imperfect song of the early weeks is, of course, well known, but the song also becomes imperfect at the end of the season of song, if not at the end of periods. My Oxford notes show that July 11th was about the usual date for the end of Chaffinch singing. With regard to autumn singing, I published a note in *British Birds*, Vol. XVI. (February, 1923) (p. 251), of a bird that continued, in bits at any rate, almost every day till October, the fall of the leaf. Later records are scarce, though I have heard it in November, and once on December 8th. On February 4th, 1901, I recorded a Chaffinch sing its song, though imperfectly, seventeen times in a minute! I fancy there is a waning of Chaffinch song in the last week of April and the first of May.

It is the staccato nature of the Reed-Bunting's song (*Emberiza s. schæniclus*) that strikes me: "chip, chip, chooce" seemed the typical form along the banks of the Pang in Berkshire. Its song begins in mid-February and lasts till nearly the end of July. The Yellowhammer also begins in February and sings late in August. Its song not only varies at the start, but the finish is sometimes up, and sometimes down. The Fen-country Yellowhammers end weakly, and the "no cheese" is difficult to recognize.

I regard the Pied Wagtail's (*Motacilla a. yarrellii*) song as infrequent. One hears it occasionally in February and March. Is it the advertisement of the male bird? At the same time, I have records for the middle of June. On August 14th one sang excitedly because a cat was stalking its young. Once, on April 29th, I had a view of a beautiful courting scene. The cock approached from ten feet or so away, bobbing his head straight up and down, with body flattened out. Then, when he got near, he danced round with wings curved and

expanded, and his tail also expanded and drooping, and singing all the time. The hen with tail raised and head lowered stood snapping her bill.

I have only two records of the song of the Grey Wagtail (*Motacilla c. cinerea*), both in October. One was an astonishing performance. The bird was on the top of a young lime tree by the barges at Oxford, and it sang a considerable song "seep, seep, seep," followed by "chewit, chewee," with very sweet notes, rather like a Linnet.

The song of the Tree-Creeper has escaped the notice of some ornithologists. Its delicate quality accounts for Warde Fowler not knowing it well. Good hearing is a great blessing for the enjoyment of bird-life. He wrote in 1919, in a letter, "I regret to say the songs have been rapidly disappearing from my ears for some time past. I did, however, get near enough to most of the summer birds to hear them once and again this year; but it is most provoking to see the Sky-Lark, Tree-Pipit, etc., singing away joyously, and to hear nothing at all." Seebohm says, "The song of the Creeper is only rarely heard, usually in March and April," whereas the song may be heard in any month of the year, though infrequently in November and December. I heard one singing strongly, many times, on December 27th, 1925. Its full song generally begins in the second or third week of January, and I can recognize no real break, unless perhaps in early April, right away to mid-June. After that it is not infrequent, but not periodic. However, in 1921, I noted it daily from August 9th to September 7th. My notes generally give "imperfect" in October. This is a typical bird of the Christ Church walks. I heard one sing once on the wing, as it pursued another. The song is very definite, as definite as a Chaffinch's, but is of very slight quality, tinier perhaps than the "fine, thread-like song" of the Goldcrest. Naumann's description is simple but helpful perhaps, "to-ti-tirroiti."

A notable woodland sound is the ordinary "twit-wit" of the Nuthatch. Its "song" has various degrees. There is the beautiful long-drawn "twee," one of the most charming sounds of spring, fuller and sweeter than a Song-Thrush; then there is this "twee" repeated several times, sometimes slowly, sometimes quickly, and finally there is the rapid "trill," as it has been called. These notes may be heard from January to June, most persistently in May and June, otherwise occasionally. But these sounds come in again in autumn, from September. In 1914, for instance, I heard them many times

in that month. They occur even in December, on Christmas Day for instance, and even the "trill" I have heard on December 5th.

Though the Great Titmouse (*Parus m. newtoni*) and Blue Titmouse (*Parus c. obscurus*) are in full song only till the end of May, I have many instances of their song in later months, often for two or three days together, in every month, August perhaps the rarest: *e.g.*, Great Tit, June 18th, 19th and 21st in 1921; Blue Tit, September 6th, 8th and 9th in 1915. The Blue Tit's song varies considerably, though the commonest phrasings are "tit-tit-tittee," or, to use absurd words, "tipsy geegee"; sometimes it is all on one note. I have frequently noticed intense or ecstatic singing of the Blue Tit. Dates for this are April 30th, May 2nd. On one occasion the bird sang thirteen times in one minute, twelve in the next. Sometimes the "tee-tee-tittee" ends with a sort of trill. The Great Tit is always apt to surprise us with some strange notes, especially in spring and autumn.

The Coal-Tit (*Parus a. britannicus*) is of course heard in spring, but I am struck with the constant entries for July in my Oxford notes. It has two forms of dissyllabic song, which quite distinguish it from the Marsh-Tit (*Parus p. dresseri*). It begins perhaps with an iambus, "chichee, chichee," and then swings over to a trochee, "weecho, weecho." The Marsh-Tit is not always easy to distinguish from the last by voice alone. Its ways and character are different, and on the whole its notes are more musical and sweeter. A phrase which I write "chichi-jooee" is unmistakeable, and another attempt to describe its song is "p-chip, p-chip, p-chip."

Some people say the Spotted Flycatcher (*Muscicapa s. striata*) sings, but it is hard to persuade oneself of it. I have one note at any rate of hearing it render a lilting version of its ordinary "zee-chit-chit," which is so noticeable when the young are about in June and July, and I wrote it down then as "zeet-zeet-zeet-zeet-chick-chick."

Taking the Garden-Warbler (*Sylvia borin*), Blackcap and Lesser Whitethroat, I think I can trace two periods of song. The first lasts to the end of the first week in June, though the Garden-Warbler is naturally a bit later than the other two, say roughly a week. My Oxford notes seem to show a period of Garden-Warbler from May 19th to June 22nd. In the same year a Blackcap began his second period from June 21st to July 16th. Warblers are more evasive than other birds, and no doubt limits of periods differ according to the nature of the summer conditions. This applies to the Lesser Whitethroat

more than to the other two. The July singing is always more chancy than the early period. I used to reckon at Bradfield that many Blackcaps had a very regular song, tending to a form stereotyped like a Chaffinch's but, of course, Warblers have a wider capacity for song than Finches.

The queer, stammering song of the Wood-Warbler (*Phylloscopus s. sibilatrix*) was very familiar at Giggleswick, being heard very continuously in some trees close to the classrooms. On the other hand, at Oxford and at Bluntisham my experience is the same : I hear it just one day in the year, evidently *en passant*. Oxford dates were April 20th, 30th, May 3rd, 5th ; Bluntisham, May 3rd, 15th.

The Redwing no doubt is never heard in full song in England. The best performance I have heard was in an alder brake at Bradfield on February 18th, 1904. It was an astonishing song, hardly like a Thrush's, but had distinct phrases as of a Linnet or Warbler. I find I wrote the same description on November 13th, 1913, when I listened to a Redwing singing close to me in a thick thorn hedge. If I had not seen the bird I might have thought it was a Warbler. The chorus-singing of Redwings is remarkable. In the Christ Church Walks it would begin early in the year, and increase in intensity and excitement as spring advanced. One could pick out phrases here and there, harsh " chats " like a Fieldfare's (*Turdus pilaris*) and hurried cadences of " chee, chooi, chooi " being the most characteristic.

A Wren sang its song seven or eight times over without a break on June 14th, 1912.

The " jarring " of the Lesser Spotted Woodpecker certainly seems to take the place of song. It can be noticed in February, March, April and May, and again sometimes in September, October and November, the latter being the most likely of the three. In 1920 I heard it every day from April 28th to May 11th. In June one hears the noisy " wicky, wicky, wicky " of the young in the nest. The bird's ordinary cry, " keek, keek, keek," which may frequently be heard, is uttered slowly when the bird is courting ; perhaps as it indulges its beautiful parachute flight, which is so unlike its usual dipping style. The rather similar cry of the Wryneck (*Jynx t. torquilla*) is more ventriloquial, and harder to locate.

The noisy, laughing cry of the Green Woodpecker (*Picus v. virescens*) is most noticeable in January and February, though it continues during the spring months. The country people consider it a sign of rain. It is to be heard also in the later months of the year from September to December.

Besides its excited call of "chick chack," the Common Snipe (*Capella g. gallinago*) utters on the ground a repeated "chuckee, chuckee, chuckee." I heard it drumming well on August 10th, 1922, over Bury Fen. On April 2nd, 1921, I was watching a Snipe which uttered "chick chack" at the same time as it "drummed."

It was long before I learnt that the mysterious "pluck, pluck, pluck," which one hears overhead at night in early summer was the voice of the Moor-Hen (*Gallinula c. chloropus*) indulging in flight. My dates for it are May 10th, 12th, 13th, 17th, and June 25th, 27th.

THE DURATION OF LIFE IN BIRDS.

MAJOR S. S. FLOWER has recently made a valuable contribution to this subject, and his paper* has considerable interest to ornithologists, although his evidence, like that of previous writers, is based on birds living in captivity or in semi-domestication.

During his twenty-six years at the Giza Zoological Gardens, Major Flower evidently kept most careful records, and the result is that he has been able to make notes on no less than 8,145 individual birds, which are summarized in two valuable tables. A further table is given of comparative ages based on all acceptable available evidence, and this shows that "609 different species can live for over ten years, 137 species for over twenty years, and 41 species for over thirty years." In addition to the tables, details are given under species headings arranged in systematic order and these form the main part of the paper.

Answering the six questions put by the late J. H. Gurney in his well-known paper on the subject (*Ibis*, 1899, pp. 19-42), Major Flower comes to the following conclusions:—That we do not yet know whether birds of some families live longer than those of others, we only know that some live better than others in captivity; that we do not know whether females live longer than males; that the evidence does not suggest that birds which are long in incubation live longer than others; that as a general rule large birds live longer than small ones; that *in general* birds live longer than mammals; that the evidence does not suggest that birds laying one egg live longer than those laying ten. A more pertinent question than the last would be, we think, whether birds rearing less young in a season live longer than those rearing more young, and this indeed must be so on the average. A further question of interest would be whether birds which take a longer time to reach maturity (*i.e.* a breeding age and not necessarily maturity in plumage) live longer than those which take a shorter time.

As to the greatest age to which individual birds have lived, this depends to a large extent upon what evidence we accept as really reliable. Major Flower, in his detailed notes under species, has been, no doubt rightly, severe in excluding favourite and often repeated stories, which are not supported

**Contributions to our Knowledge of the Duration of Life in Vertebrate Animals.*—IV. *Birds.* By Major S. S. Flower, O.B.E., F.L.S., F.Z.S. Reprinted from *Proc. Zool. Soc.*, Part 4, 1925, pp. 1365-1422.

by incontrovertible evidence. The longest lived individual bird which he admits definitely is an Eagle-Owl of 68 years.

Whether ringing will ever give us reliable facts on average age or longevity in wild birds is a matter of doubt, since the individuals which escape accident and those which die and are not found or not reported are surely of greater importance in this respect than the small proportion which comes to hand. Moreover, in the case of longevity, there is always the possibility of the ring or the inscription on the ring wearing out in the lifetime of the bird. Nevertheless, it may be of some interest to give here ages of nine years or over which have been reached by wild birds ringed under the *British Birds* scheme. To these I have added some records derived from other marking schemes, which have been very kindly supplied to me by Dr. A. Landsborough Thomson, who warns me, however, that they are by no means exhaustive. A comparison of these with Major Flower's notes on the same species in captivity is given. Most of these birds were ringed as nestlings, and the period during which they have worn the ring is thus practically the same as their age, but in some cases the birds were ringed as adults and this is not always indicated in foreign records. In the *British Birds* records there is only one such case, which is noted under Lapwing.

SONG-THRUSH (*Turdus philomelos*).—Ringed, 8 years 10 months (Thomson, *Ibis*, 1921, p. 508). Captivity, certainly 12 or 13 years, probably 15 or 17 (Flower).

BLACKBIRD (*Turdus merula*).—Ringed, about 10 years (had been dead some time when found) (*Brit. Birds.*, XVIII., p. 187). Captivity, 7 to 11½ years and possibly over 20 (Flower).

SWALLOW (*Hirundo rustica*).—Ringed, 9 years (Thomson, *Problems of Bird Migration*, p. 156). Captivity, one said 9 years (Flower).

COMMON BUZZARD (*Buteo buteo*).—Ringed, 15 years 5 months (Thiennemann, *Journ. f. Orn.*, 1926). Captivity, 25 years (Flower).

WHITE STORK (*Ciconia ciconia*).—Ringed, four 9 years, one 10 years, one 11 years (*cf.* Thomson, *Problems of Bird-Migration*, p. 166). Captivity at Giza, average of twenty individuals 17 years, maximum 24 years (Flower).

GLOSSY IBIS (*Plegadis falcinellus*).—Ringed, 9 years 11 months (Schenk, *Aquila*, 1924).

COMMON HERON (*Ardea cinerea*).—Ringed, 15½ years (*Brit. Birds*, XIX., p. 276); 8 years 10 months (Saxtorph, *Dansk Orn. For. Tidsskrift*, 1922). Captivity, 20½, 21 and 22 years (Flower).

PURPLE HERON (*A. purpurea*).—Ringed, 13 years (Schenk, *Aquila*, 1924). Captivity, 23 years 10 months (Flower).

MALLARD (*Anas platyrhynchos*).—Ringed, 10 years 4 months (Thomson, *Brit. Birds*, XVI., p. 265). Captivity, twenty individuals of Mallard, Pintail and Wigeon averaged 21 years 5 months (Flower).

CORMORANT (*Phalacrocorax carbo*).—Ringed, 10½ years (*Brit. Birds*, XVII., p. 240). Captivity, 23 years, 12½, 12½ years (Flower).

LAPWING (*Vanellus vanellus*).—Ringed, 11 years 8 months (Thomson, *Brit. Birds*, XVIII., p. 60), 11½ and 9½ years ringed as nestlings, 9 years ringed as adult (*Brit. Birds*, XIX., p. 17; XVI., p. 17, and XVIII., p. 190). Captivity, 13 years 7 months, average of seven, 5 years 8 months (Flower).

BLACK-HEADED GULL (*Larus ridibundus*).—Ringed, 12¾, 10½, 9½, 9½ years (*Brit. Birds*, XVII., p. 81; XV., p. 112; XVI., p. 304). Over 12 years, about 12 years, about 9 years (Thienemann, *Journ. f. Orn.*, 1923, 1924, 1926). Captivity, 21 years 5 months in London; about 17 years in Frankfort; at Giza eleven individuals were all living 11 years after being received (Flower).

COMMON GULL (*L. canus*).—Ringed, 11 years, 10 years 5 months (Thienemann, *Journ. f. Orn.*, 1923). Captivity, 15 years 10 months (Flower).

HERRING-GULL (*L. argentatus*).—Ringed, 13, 13 and 9 years (Thienemann, *Journ. f. Orn.*, 1924, and van Oort, *Ardea*, 1923). Captivity, 10 years 8 months, 11 years 7 months, and cases of 21 and 44 years (Flower).

LESSER BLACK-BACKED GULL (*L. fuscus*).—Ringed, 8¾ years (*Brit. Birds*, XIV., p. 131); 9 years 4 months (Thienemann, *Journ. f. Orn.*, 1923). Captivity, 25 years 5 months, 20 years 10 months, 18½ and 17 years, and cases of 30 to 31 years (Flower).

COOT (*Fulica atra*).—Ringed, 9 years 2 months (Thienemann, *Journ. f. Orn.*, 1924). Captivity, 13 years 4 months (Flower).

H. F. WITHERBY.

NOTES

TWO PAIRS OF WOOD-WARBLEDERS NESTING CLOSE TOGETHER.

ON May 30th, 1926, I watched a Wood-Warbler (*Phylloscopus s. sibilatrix*) on to its nest in a wooded valley near Plymouth. On going to the nest she fluttered out, and when I stooped to examine it a second bird flew out from a second nest a few inches below the first. The entrances faced slightly different ways, but the distance between them was easily spanned with my pencil. Each bird was sitting on six eggs; both nests and eggs were typical, and I afterwards watched both birds back on to their nests again and heard their mates singing. The species is very plentiful in this particular valley, so that territories are very limited in the more congested areas (there are long stretches, especially on the higher ground, quite unoccupied); but I think fifty yards is the shortest distance I have previously noted between two nests. There are, however, nests of a Wood-Warbler and a Willow-Warbler (*Ph. t. trochilus*) only six yards apart under the same gorse bush, and two years ago they were only three yards apart.

A. H. MACHELL COX.

NESTING OF MARSH-WARBLEDER IN KENT.

IN the *Practical Handbook* (1920), the authors' remark on the Marsh-Warbler (*Acrocephalus palustris*) is "Apparently scarce and local, but distribution still not well known." It seems to me that so few people recognize the bird when they see it, hence it is overlooked. In fact, I doubt if anyone could identify it for certainty by sight only.

But there are at least three ways of being sure of the species: the song, the nest, and nine times out of ten the eggs. In 1907 I heard the bird near Maidstone, but had no time to stay in the locality to make sure. But this year I have seen, heard, and a friend found the nest containing five fresh eggs in the Medway Valley on June 19th, 1926.

The nest was as usual "slung"; this nest on four stems of this year's growth of the guelder rose (*Viburnum opulus*) with the typical "basket handles." There was the usual meadow-sweet (*Spiræa ulmaria*) growing close by and in a withy bed near a river. As regards the meadow-sweet, I have only once found a nest of a Marsh-Warbler without this flower growing close by.

The song of this bird is quite distinct from any other British warbler, but in addition the bird's power of mimicry makes identification much easier. On one occasion I heard one in Gloucestershire mimic a Song-Thrush, Green Woodpecker and Common Partridge one after the other and then break into its own melodious notes.

The shape and materials of the nest and the method of attaching it to stems and being supported by "basket handles" are, I believe, unique for a British warbler; it is quite distinct from a Reed-Warbler's (*A. scirpaceus*) nest. No one, in my opinion, could confuse the eggs with those of any other British species. The previous records for Kent are as follows:—

Mr. Collingwood Ingram, June 24th, 1905, locality not stated.

Mr. Percy F. Bunyard, Birchington, June 22nd, 1909, nest and five eggs.

Mr. C. J. Alexander saw and heard the bird on June 11th, 1909, near Godmersham Hill, Stour Valley.

I believe the bird to be much less scarce than supposed in Kent, but it is usually overlooked. JAMES R. HALE.

STATUS OF THE GARDEN-WARBLER IN PEMBROKESHIRE.

THE editorial note in *British Birds* (Vol. XIX., p. 314) that eggs of the Garden-Warbler taken near Pembroke in 1907 appear to be the only evidence of the nesting of this species in the county is somewhat surprising. Much depends upon the meaning attached to the word "evidence." As long ago as 1866, Thomas Dix recorded the Garden-Warbler as being about as numerous as the Blackcap in the north-eastern portion of Pembrokeshire (*Zoologist*, 1866, p. 134). It is true that M. A. Mathew, in his extremely untrustworthy book *The Birds of Pembrokeshire* (1894), stated that this bird "seems to avoid our county"; but he was haunted by an absurd theory that the Precelly hills formed an insurmountable barrier for certain species of migrants. "It occurs only rarely in the north-east part of the county; the Precelly Mountains shut it off from visiting the central and southern districts, where it is never seen," he wrote.

Nowadays, at any rate, Garden-Warblers, though sparsely distributed, cannot be called very rare nesters in other parts of Pembrokeshire besides the north-east corner. Mr. Charles Oldham and I have watched them and heard them singing

near Fishguard in June, 1921, and 1926; near Newport (several) in June, 1926; near Maenclochog in June, 1926; and near Letterston in mid-July, 1925. BERTRAM LLOYD.

[We referred to published evidence of the actual finding of the nest.—EDS.]

LARGE CLUTCH OF EGGS OF GREEN WOODPECKER.

ON May 8th, when walking through a hornbeam and oak wood near Sávârsin (late Soborsin), Roumania, I flushed a Green Woodpecker (*Picus v. virescens*) from a hole about 15 feet from the ground, in a dead hornbeam tree. Beneath the hole were the usual chips in great profusion. On digging out the hole I discovered the nest-hollow contained nine eggs! These were all slightly incubated and quite normal except that they are rather smaller than two British-taken sets I have compared them with. One of the old birds at once returned to the nest-hole entrance after my descent from the tree. It was at once vigorously assailed by a pair of Collared Flycatchers (*Muscicapa albicollis*) and driven away. Time and again this happened until the Woodpecker apparently gave up the contest and I took my departure.

The sequel to this curious episode is that the Flycatchers at once built a nest in the bottom of the Woodpecker's hole. On May 18th the nest appeared to be complete but contained no eggs. On May 27th the Collared Flycatcher was sitting on three incubated eggs.

NOTE.—First layings of Collared Flycatchers were *invariably* found to consist of six eggs, while second were *invariably* threes or fours. This species suffered very severely from dormice, which repeatedly turned them out of their nests and took them into occupation. W. M. CONGREVE.

[As to Green Woodpecker I have five records of clutches of eight from England, but none of nine. Dresser (*Eggs of Birds of Europe*) says that occasionally it lays "even nine," but I do not know what his authority is for saying this. Of course, up to twenty-nine eggs have been taken from one hen by removing the eggs one at a time, but this is not a clutch.—F.C.R.J.]

EARLY NESTING OF LESSER SPOTTED WOODPECKER.

My friend, Canon E. Lorimer Thomas, informs me that he heard the notes of a Lesser Spotted Woodpecker (*Dryobates*

minor comminutus), and shortly afterwards found its new nesting-hole, in mid-April, 1926, in north-west Denbighshire.

The female was flushed from the nest-hole on May 10th. The unmistakable notes of young birds were then heard from inside the hole.

The *Practical Handbook* mentions the extremely early date of May 9th as a record for early young. It would be interesting to know if this latter record emanated from a district as far north as North Wales? W. M. CONGREVE.

[The record in question is from Essex.—F.C.R.J.]

NINE EGGS OF SPARROW-HAWK IN SAME NEST.

IN a somewhat extensive planting some miles from Strandtown, Belfast, I found a nest of a Sparrow-Hawk (*Accipiter n. nisus*), which, on June 4th, 1926, contained nine eggs. The nest was still empty on May 8th, though quite ready to be laid in. On the 15th, I flushed the hen off five eggs. It seemed strange to me at the time that she should have "ignored" the customary one-day interval between layings. On returning, almost a fortnight later, my astonishment was considerable on seeing nine eggs in the nest. Two eggs were particularly boldly marked, the remainder being less striking in appearance. They were all warm. The nest is large and is this season's. It is situated in a fir, about 30 feet from the ground, in a lonely spot in the woods.

Subsequently, on June 14th, I saw two females at the nest of still unhatched eggs. NORMAN GREEVES.

[This is evidently a case of two females laying in the same nest. When the *Practical Handbook* was written, no clutch of nine eggs of this species had been recorded, but since then an instance of ten has been noted, *vide* Vol. XIX., p. 180.—EDS.]

LARGE CLUTCH OF EGGS OF BLACK KITE.

ON April 24th, 1926, in a large wood near Timisoara (late Temesvár), Roumania, I saw a Black Kite (*Milvus m. migrans*) sitting on its nest, about 50 feet from the ground, in a solitary oak tree standing in a somewhat isolated position in a portion of the wood which had been cleared of timber.

My companion, young D. Lintia, climbed to the nest and, to my amazement, called out that there were five eggs in it. These he duly brought down and handed to me.

The eggs were quite normal in size and of the fine spotted type. They were rather dirty, and the dirt on them synchronised to a certain extent with the variable incubation.

The last egg laid was absolutely clean, slightly longer and of less diameter and not so heavily pigmented as the other four—these latter being extremely even in appearance. Incubation was variable from formed embryo to quite fresh. There were various other pairs of Black Kites breeding in this wood and there was no lack of sites, but no other nests close at hand. The nest was of the usual rag-lined type. The majority of the other pairs had not yet laid. I think there is not the slightest doubt the five eggs were laid by the same bird.

On May 22nd, in the same wood, I climbed to another Black Kite's nest which the bird was very reluctant to leave. This nest contained two young of different ages, a third youngster nearly out of its shell and a fourth egg! This latter, I imagined, might be unfertile so I chipped it, only to find it contained a vigorous youngster. This is clear proof of a "four" clutch. Three other nests examined by me on this date contained two or three eggs or young in each case.

W. M. CONGREVE.

[The only evidence of a clutch of five eggs in the case of the Black Kite which I have ever come across is in a paper by H. Goebel in the *Journal für Ornithologie*, 1873, pp. 128-133, on the Birds of the Uman district, South Russia. He gives without comment the measurements and weights of a clutch of five eggs taken on May 8th, 1872. Clutches of four are rare in this species, and besides this record I only know of definite cases from E. Roumania in 1911 (Messrs. Ratcliff and Mackenzie Murray), from Tunisia in the Museum Koenig at Bonn, and three or four records from Germany and S. Russia. Dr. Rey had four fours also in his collection. Out of all the many nests examined in Spain I never met with more than three, and the great majority contained only two, so it is evident that Spanish birds are less prolific than East and Central European.—F.C.R.J.]

PROLONGED INCUBATION BY LAPWING.

ON April 24th, 1926, I found a nest of the Lapwing (*Vanellus vanellus*) at Wernfadog, Glamorganshire. It contained four eggs. Some little time later it contained three eggs only, and these still remain in the nest and the bird continues to sit upon them, and they were quite warm when I visited the nest on June 3rd. I have seen the eggs practically once a week since April 24th.

W. J. PERCY PLAYER.

[In all such cases of prolonged incubation the eggs are, of course, infertile. Instances are fairly frequent, but have seldom been recorded with actual dates; cf. Vol. IX., p. 94.—EDS.]

REDSHANK AND LAPWING LAYING IN SAME NEST.

THE nest of a Redshank (*Tringa t. totanus*) was found in Cumberland on June 26th, 1926, containing three Redshank's eggs and four Lapwing's (*Vanellus vanellus*). R. H. BROWN.

EGG DEPOSITION BY THE CUCKOO.—Mr. W. B. L. Barrington (*Field*, I. vii. 26, p. 31) gives an interesting account of the deposition of a Cuckoo's egg in a nest of the Pied Wagtail (*Motacilla a. yarrellii*), at Windsor Forest, on June 8th, 1926. At 7.30 p.m. (summer time) a Cuckoo (*Cuculus c. canorus*) alighted on a holly bush about 5 ft. from where the observer was standing at a window. She was evidently greatly excited, with head-feathers erect and beak slightly open, and presently plunged into a jasmine growing on the side of the house. She scuffled about for a minute or so, but ultimately squeezed herself on to a nest built on a ledge $2\frac{1}{2}$ in. wide and 2 ft. below the window, but 3 ft. to one side of it. She remained on the nest for about $1\frac{1}{2}$ minutes and was in the jasmine about $2\frac{1}{2}$ minutes. When she flew out Mr. Barrington was unable to see whether she carried an egg or not. The Wagtail, which was feeding below, took no notice of the episode, but a Blackbird which was nesting close by was much interested and peered into the nest after the Cuckoo had left. On examination next morning a Cuckoo's egg and a Pied Wagtail's egg were found in the nest, which was supported by three stiffish stems behind which the Cuckoo managed to squeeze herself. Another communication from Mr. D. McNab, a keeper at Glenfulloch, Dumbartonshire, describes the movements of a Cuckoo when depositing her egg in a Meadow-Pipit's nest, but in this case the observations were made with a telescope about 100 yds. away, and it is difficult to understand how the acts of deposition and removal of eggs could have been witnessed in a Pipit's nest in a tuft of grass at such a distance.

WHITE NESTLING SNIPE IN LANCASHIRE.—Mr. Richard E. Knowles informs us that, on May 22nd, 1926, he and Dr. M. S. Wood found on a bog in north Lancashire a nestling Common Snipe (*Capella g. gallinago*) that was perfectly white, with black eyes, yellow legs, and a yellow bill slightly shaded with brown. It was apparently three or four days old. They were informed by a keeper that he had seen a second nestling belonging to the same brood that was exactly similar except for a brown spot on the head. The nestling was ringed, so that it will be interesting to see what kind of plumage it develops, should it later on be reported.



LETTERS



THE BIRDS OF ESSEX.

To the Editors of BRITISH BIRDS.

SIRS,—I shall be obliged if you will give publicity in your columns to the fact that I have accepted from the Essex Field Club an invitation to prepare an up-to-date account of the Birds of Essex, in the hope that the collection of further information may be facilitated. I shall be grateful for information of any kind which may shed light on the subject. Records of all natures, whether of rare or common species, will be welcomed. Particulars of collections of either birds or eggs, which have been formed in the County, will be valued, likewise notes on the movements of birds, which might serve to advance the study of migration in the County. All communications should be sent to me at the address below.

WILLIAM E. GLEGG.

THE HOUSE, ALBION BREWERY,

WHITECHAPEL RD., E.1, 1st July, 1926.

A VERTEBRATE FAUNA OF SOUTH WALES.

To the Editors of BRITISH BIRDS.

SIRS,—Capt. H. A. Gilbert of Hereford, Capt. H. Morrey Salmon, M.C., of Cardiff, and I, are collecting material for a list of the vertebrate fauna of South Wales and Monmouthshire, with a view to publication.

Schedules have been prepared for the birds, and I should be pleased to send one to any of your readers who would be kind enough to help us by filling in upon it notes from any of the following counties:—Monmouthshire, Glamorgan, Breconshire, Radnorshire, Carmarthen-shire, Cardiganshire, and Pembrokeshire.

Full acknowledgment of all such assistance would be made.

GEOFFREY C. S. INGRAM.

22, WATERLOO ROAD, PENYLAN, CARDIFF, 29th June, 1926.



- 3 AUG 1926
PURCHASED

WANTED.—Birds in variety plumage, or would purchase whole collection of such.

C. J. CARROLL, Rocklow, Fethard, Co. Tipperary.

LE GERFAUT

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NOTES ON ALBERTA WADERS INCLUDED IN
THE BRITISH LIST.*

BY

WILLIAM ROWAN, M.Sc., F.Z.S., M.B.O.U.

PART III.

TURNSTONE, BARTRAM'S SANDPIPER, SANDER-
LING, KNOT AND DUNLIN.

(Plate 4.)

Arenaria interpres morinella, RUDDY TURNSTONE.

ABOUT our race of the Turnstone there is little to say. It is almost a duplicate of the British bird and juveniles are quite

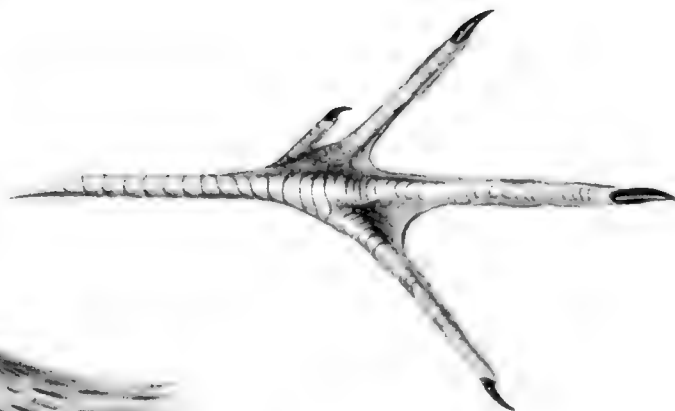
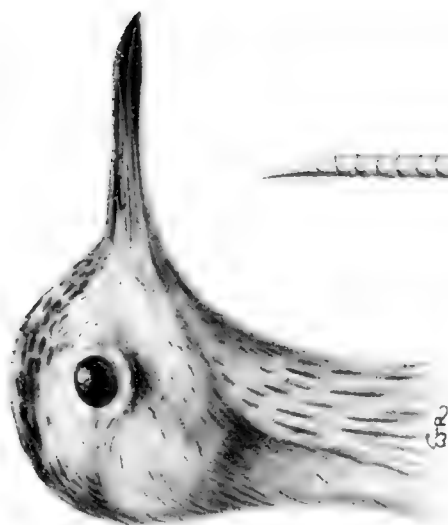


Fig. 7. RUDDY TURNSTONE (*Arenaria interpres morinella*).
Adult female. May. 5/6ths nat. size.
(Copyright by W. Rowan.)

indistinguishable. Adults in life strike one as being lighter and brighter than *interpres*. The average wing length of specimens in my collection is 147 mm.

This is one of several birds that are so rare on migration in the southern parts of the Province that they must virtually

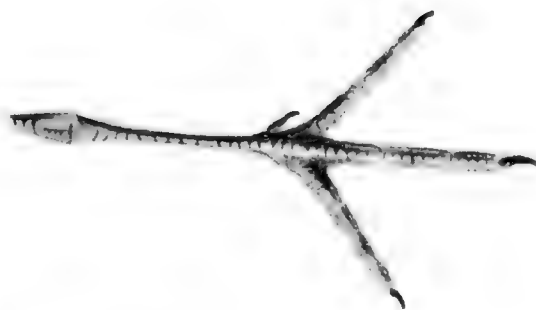
*ERRATUM.—In Part II., *antea* p. 37, line 12, for “is inherent” read “is *not* inherent.”



BARTRAM'S SANDPIPER.

Adult male, June.

4/5ths nat. size.



AMERICAN DUNLIN.

Adult female, October.



be considered accidentals. Yet to the north of us, in this case no further north than Lake Athabasca (Preble, *N.A. Fauna*, No. 27, and MacDonald), they get extremely abundant on migration. The Turnstone is also rare in Saskatchewan, both in spring and autumn (once recorded in large numbers, Mitchell, *Condor*, 1925), but on Lake Winnipeg in Manitoba (May, 1920) I have seen it in scores. The *Check-List* does not commit itself to any opinion as to the migration routes of this species, while Cooke has practically nothing to say. It is quite possible, and perhaps quite likely, that some of the ducks exhibiting the same peculiarity in migration reach the north of the Province by crossing the mountains and so leave a permanent vacuum to the south, but it is very unlikely that the Turnstone and such Passerine species as the Harris Sparrow (*Zonotrichia querula*) should do so. In fact, the evidence points to a strong westward drift in the spring and an eastward one in the fall, so that Edmonton and the south of Alberta are missed altogether except by strays. Some years the Turnstone is fairly numerous, but its numbers appear to be subject to variation in all the prairie provinces.

An alternative explanation is that the species travels north in very long stages. Lakes Winnipeg and Athabasca would both be likely stopping places. The species is one of the few that winters regularly in Hawaii (Henshaw, *Auk*, 1910) and is therefore capable of very sustained effort.

Bartramia longicauda, BARTRAM'S SANDPIPER (*A.O.U. Check-List*, Upland Plover).

Bartram's Sandpiper is one of our most interesting shore-birds. It is a Sandpiper that has imitated the Plovers in appearance and habits and has done it with profound success. At our lake it is, curiously enough, extremely rare, and we have but two records of it. This is probably due to three things. The bird breeds but sparsely in the northern sections of the Province (although its breeding-range extends to the Arctic in patches, for it is distinctly local); it is not a bird of the lakes, and its migration line appears to be somewhere to the west of us. Some years at least it gets plentiful on migration on Lake Athabasca (Preble). MacDonald found it breeding abundantly, together with the Grey Plover, on the plateaux of the mountains to the west of the Carcajou River which drains into the lower Mackenzie.

I had the opportunity of getting familiar with this bird on its breeding-grounds in the south of the Province during a short stay with Mr. T. E. Randall at Sullivan Lake in the

spring of 1924 (Fig. 8). Here I found the species common and mostly commencing to lay (first week of June), though some of the eggs were fairly well advanced in incubation. The birds were plentiful and we got many opportunities of observing their general ways. This was a satisfactory state of affairs, for this Sandpiper does not seem to approve of cultivation and is deserting many of its former nesting-grounds. In recent years, however, it is reputed to have shown increase in many localities in the prairie Provinces and in the northern



Fig. 8. TYPE OF COUNTRY IN WHICH BARTRAM'S SANDPIPERS BREED.
SULLIVAN LAKE, ALBERTA.

(Photographed by W. Rowan.)

States. It is probably recovering its numbers where it occurs in the south, although its range seems to be diminishing.

There is but a single respect in which Bartram's Sandpiper actually resembles a Sandpiper and that is in its appearance as it flies away from one. The tail with its dark centre and pale margins and white on the sides of the rump, leaves the impression of one of the common Sandpipers disappearing. In every other respect the bird is a Plover, from its carriage to the nervous way of running quickly for a short distance, stopping suddenly to peck on the ground and then dubiously running again. In flight the tail, which is actually rather

long, looks quite insignificant, unless spread, which it occasionally is. The wings on the other hand look excessively long at all times. The usual flight on the breeding-grounds is a rapid wing-beat like a hovering Kestrel's or a Willet's (*Catoptrophorus semipalmatus inornatus*) when in song. This is in marked contrast to the strong, steady strokes employed



Fig. 9. NEST AND EGGS OF BARTRAM'S SANDPIPER.

(Photographed by W. Rowan.)

at other times, *e.g.* on migration. (The Solitary Sandpiper shows the same peculiarity.) A bird put off her nest on a very windy day frequently soared into the wind and came back with the usual short beats. When soaring she looked very Hawk-like. The birds constantly perch on telephone poles, fence posts, roofs and tree-stumps.

The nests found were very variable in make-up and situation. One had no lining whatever and consisted of a mere scrape in the ground. This was in a hollow right in the open on a huge sandy area with but sparse vegetation, on which Long-billed Curlews (*Numenius americanus*) were nesting. Others were in clumps of rough brush (Fig. 9), and this is probably typical for this locality. Another was in long grass (Fig. 10.) The most elaborate lining noted consisted of leaves, bents and small twigs. One clutch of five eggs was



Fig. 10. NEST AND EGGS OF BARTRAM'S SANDPIPER.

(Photographed by W. Rowan.)

found and one of three, the latter no doubt incomplete as the bird was not about and the eggs were fresh.

Without doubt the most striking thing about Bartram's Sandpiper was the fact that parties of three were commoner than pairs, yet there was absolutely no sign of quarrelling that we could see. Two of these trios were successfully collected complete. In both cases two of the birds were males. Examination of the ovary of one of these females added another surprise, for she had already laid two eggs, while the third was at the end of the oviduct ready for laying. The female of the other trio had not yet laid. There were no

discharged follicles. The largest ovum was a little more than a centimetre in diameter. Whether this is to be looked upon as normal polyandry or merely due to a temporary or local excess of males, it would be impossible to say without further evidence. But the fact itself is remarkable, for it is obvious that the two males not only retained their interest in the female after laying was in progress, but managed to do it amicably. And this certainly suggests normality. The other trios were also made up of the same elements, for the disparity in the size of the sexes makes judgment relatively easy.

In contrast to their temperament off the breeding-grounds, none of the Bartram's Sandpipers that we saw could be termed wild. They were easily approached even in the open. When put off the nest the birds usually stayed in the neighbourhood, frequently flying round at close quarters. One bird, owning fairly well incubated eggs, ran away, feigning injury before taking flight. Randall tells me that when the young are running the birds get very demonstrative and much noisier.

As to calls, these are rich in quality, characteristic and unmistakable. The most beautiful of all is the loud, ringing



e-whee.

produced either in flight or from the ground. The first syllable is weak and does not carry far and may be repeated two or three times. The second descends through about half an octave, and can be heard at a great distance. On rising from the ground a very beautiful, rich bubble, reminiscent of the Curlew's (the English one, for ours appears never to bubble) is frequently uttered. Two of the birds put off the nest left with a call not heard again, a rapidly repeated



"hu hu hu,"

rather like the Whimbrel. The species is, however, comparatively silent and calls were heard at rather infrequent intervals.

Crocethia alba (A.O.U. Check-List, *Calidris leucophæa*)

SANDERLING.

The *Check-List* does not commit itself on the subject of the migrations of this species. Cooke says "it is quite rare (on migration) in all the district between the Great Lakes and

the Pacific coast." Here, however, it is not only regular and abundant, but often, perhaps usually, exceedingly so. It is late, both in the spring and the autumn, but in the fall may be more numerous than all other shore-birds put together. Harrold took one on April 29th in 1923 ; I took another on May 1st, 1925, still in almost full winter plumage, but between these dates and about May 24th we have nothing but one or two odd records of single birds, for it is in the last week of May that the Sanderling really begins to show up. It gets abundant at the very end of the month and during the first few days of June, after which we do not see it again till about the end of September, sometimes the middle, and exceptionally (1925) in August. It stays till the last half of October. Our latest record is that of a single bird taken on November 11th.

Beyond pointing out that it is regular and abundant, if a somewhat late migrant in Alberta, there is little to say of the Sanderling. It is late in its spring moult and we have not seen a single bird in full plumage. Some samples collected on Lake Winnipeg on May 24th, 1920, were further advanced in plumage than any we have noted here even in June. Birds apparently still in complete winter plumage are periodically seen. But we need specimens to confirm this, for unless examined in the hand, a partial moult is more than likely to escape detection.

We have two fall records of adult Sanderling, both well on into winter plumage.

In England I have always associated the Sanderling with the sandy sea-shore. I do not think I can recall ever having seen it on mud-flats. Here it frequents the muds at all times.

Calidris (A.O.U. Check-List, *Tringa*) *canutus rufa*, KNOT.

The ways and habits of the Knot appear to me to be identical with the bird in England, although ours belongs to a different race and even the young can be told from those of *canutus*. The only comment that seems to be called for is with regard to its migrations. The *Check-List* calls it rare in the interior. It has only once been recorded from inland British Columbia (Brooks and Swarth, *List of Birds of B.C.*), and once from Saskatchewan (Mitchell, *Condor*, 1925). In Manitoba it is rare but regular on both migrations (Harrold). The fact that it was a regular fall migrant in Alberta was known to local collectors before my time ; but there were no spring records

of it. In 1922, when we collected at the Point up to May 23rd, we did not see a single Knot. In 1923 we continued till June 7th and we saw hundreds. During the next two seasons we discovered that odd birds might turn up earlier, but that the last week of May saw the main migration, always of brief duration, but heavy while it lasted. We are therefore on a regular line of travel, the fall numbers being far below those of the spring and consisting in the main of birds of the year. Our fall records of adults are few and quite late (end of September) and all specimens have been in moult with the summer plumage still predominating.

Odd Knots may be seen with practically any group of waders, but the larger flocks seem to associate almost entirely with the Grey Plover.

Calidris alpina sakhalina, DUNLIN (A.O.U. Check-List,
Pelidna alpina sakhalina, Red-backed Sandpiper).

Probably even this Sandpiper is more regular in the interior than is supposed, although in Alberta it actually seems to be nothing more than a stray. Every spring sees a few odd individuals amongst the hordes of waders on the Point, but we have never seen more than one at a time. On May 24th, 1920, on Lake Winnipeg, we saw a large flock, and others have been recorded from the same place (A. G. Lawrence). Farley's records of the species in this Province, quoted by Taverner in his list of the birds of the Red Deer (*Auk*, 1919), were either Golden or Grey Plover or both. The error arose through the misapplication of one of the popular names used in eastern Canada for the Dunlin, *i.e.* "Black-heart Plover."

The only fall record of this species in Alberta that I know of was obtained on the Point on October 31st, 1924, when I secured two adults in full winter plumage out of a flock of five. The temperature was a few degrees below zero (Fahr.) and a gale was blowing. The lake was freezing over so rapidly that one could practically watch the ice forming. I was hunting *Hydras* and *Pisidia* in the lake at the very tip of the Point in hip-waders and through going out too far had got water in at the top. When I came out the waders were frozen on to me in a few minutes. I sat down and tried to pull them off (but without success and I subsequently had to walk four miles in them). As I was thus engaged—shore-birds were the last thing in the world I was expecting although I had previously noted a couple of Grey Plovers and a Killdeer—I heard a small flock of birds pass me behind and settle on

the far side of the sandbank on which I was sitting. I reached for the binoculars and trained them on three grey-brown heads, all I could see of the birds as they fed on the edge of the ice across the bank. So decurved were the bills that I was quite certain I was about to add the Curlew-Sandpiper to the Provincial list. With the utmost care I crept along to the gun, took out the heavy duck cartridges and slipped in some reloaded with small shot. As I got up the birds flew. Even before I heard the typical Dunlin notes I had realised what they were for they had not got white rumps. I got three with my left and another with the right, for even though, to my disappointment, they were but Dunlins, they were the first actually to be collected in Alberta as far as I know and constituted the first fall record. Two fell far out and the gale had them out of reach before I could grab them. Gladly would I have swum for them could I have stripped—I have done it before in equally drastic circumstances—but those wretched waders were immovably cemented to my legs!

A STUDY OF THE ROBIN BY MEANS OF MARKED BIRDS.

BY

J. P. BURKITT.

(FIFTH PAPER)*

I REGRET that this paper brings my study to an end, as I have had to give up residence on the property where my observations were made. But I am thankful to have had this little bit of research into a corner of God's garden. It is possible I may be able to have a very occasional look for some of the marked birds. This paper brings the record from June, 1925, to March, 1926. The second half of 1925 has been chiefly remarkable for an apparent weakening of my proposition as to the permanency of males which have been parents (see A, p. 250, Vol. XVIII). Of fourteen such males, no less than nine disappeared, though, as I shall describe later, one of them temporarily reappeared and another came back to stay. This disappearance is totally contrary to my previous experience. The order in which they began to disappear at once led me to suspect age as one possible cause ; so much so that I was on the watch for certain others to go, which they did. I may add to the list of such males bird No. 22, which, though it never had a mate while with me, yet was a constant resident for two years. This makes the departure-list the following ten out of fifteen such males, with the above qualification as to two of the ten—2, 9, 19, 20, 22, 26, 38, 45, 53, 54. It is rather risky to call a bird gone until after a considerable absence, so that number 45 may be doubtful as my own departure prevented confirmation. Now the first seven of the list were seven out of the eight longest marked males, as can be conveniently seen from the Table, p. 123, Vol. XIX. This sounds a good argument for age being a prime cause of the disappearance. Yet, if we take the number to disappear as eight out of the fifteen, it seems a great lot to go all in seven months from age alone. I do not pretend to explain it, though I make some suggestions as to a Robin's life-span towards the end of this paper, but I do not believe that it means that the consistently observed habit of these birds in my previous study was mere chance. The longest marked bird is, of course, not necessarily the oldest. As to the actual age of the foregoing birds I can,

* For previous papers see Vol. XVII., pp. 294-303 ; Vol. XVIII., pp. 97-103 and 250-257 ; Vol. XIX., pp. 120-124.

however, say the following :—2 and 9 were at least $3\frac{1}{4}$ years old (9 returned and is now at least $3\frac{3}{4}$ years), 19 and 20 were $2\frac{1}{4}$ years old, 22 was at least 2 years, 26 and 38 were at least $2\frac{1}{4}$ years, 45 was $1\frac{1}{2}$ years, 53 and 54 were at least 1 year. And we must remember that if the doubtful ages should be increased, they must be increased by full years. It may be proper to exclude 45 for the reason already given, and 53 and 54 were on the boundary of my chief observation area, which means that their disappearance from the neighbourhood is not quite so proven as that of the birds inside. Any known circumstances connected with the disappearance of these parent male birds are of interest. Four appeared plainly to be displaced by other birds, *viz.* 9, 26, 38, 54. Four appeared equally plainly to be not displaced, 22, 53, 20 (45), as they left no successors. As to two others, 2 and 19, it was not clear whether they were displaced or not.

The record of No. 9 (and to some extent of 54) is particularly interesting. Are we to take them as any guide as to what happens in the other cases?

No. 9 was a bird which I saw daily in front of my house ; it would come to me on sight or to a call. On September 16th, 1925, it was there all right. The next day it was gone and its place taken by a boisterous new bird singing constantly.

This new bird I subsequently ringed as 73. I looked carefully for the dead body of No. 9, but next day he reappeared for a moment, took my food and slipped off again, evidently knowing he had lost his title to that ground. For over three weeks I saw no more of him, even though I tried to get in touch with him in case he was not far off by making myself in evidence in the direction in which he departed. Owing to the configuration of the ground I think he should have come to me even if he were a quarter of a mile away. On October 12th he again appeared and fed surreptitiously for a moment. I did not see him again till November 5th, when he came to me and fed in unoccupied ground adjacent to his old site. He had quite newly occupied it, but continued on in it. Meanwhile, his enemy 73 kept its ground, but disappeared on December 8th and left no successor. After that I expected bird 9 to quickly reoccupy his old and now empty ground, especially as he frequently came to his old feeding place there when I appeared. Finally, he did so transfer to his old spot but not till near the end of December. Thus, in this case, and even with one of my longest residents, it did not follow that displacement necessarily meant death. Robins must die, but, as I have remarked before, I have never seen in

all my study any evidence of a mortality due to combat. Of course, this is only negative. Again, another male parent, No. 54, was displaced on August 28th, but it reappeared for food on August 31st and September 12th, showing that so far it was alive. It has not been seen since.

The following is a list of the changes which took place in the several months of 1925 since the breeding-season.

I have underlined the males referred to above whose movements were so unprecedented.

Early June	Two males disappeared, <u>22 M.</u> , <u>53 M.</u> Ten female parents were not seen after this, corroborating my general previous experience. Of these, two reappeared for the spring of 1926 (as observed up to end of March).
July	One young bird, 69, became occupant of a site.
End August	One new bird, 76, became a resident. One male, 41 M., returned. One male, <u>19 M.</u> , disappeared.
September	Four new birds, 72, 73, 74, 75, became resident. Two males, 55 M., 58 M., returned. Four males, <u>2 M.</u> , <u>9 M.</u> , <u>54 M.</u> , <u>38 M.</u> , disappeared.
End October	One male, <u>26 M.</u> , disappeared. Two new birds, 77, 79, became resident.
November	One male, <u>20 M.</u> , disappeared. One male reappeared, <u>9 M.</u>
December	One female, 43 F., disappeared. One probable female, 80, became resident, but left again end of January.
At New Year	Two females, 27 F., 50 F., disappeared; one, 59 F., reappeared. (One male <u>45 M.</u> left?)

It may be noted that the disappearance of these males had nothing to do with harsh or wintry conditions.

The abnormal disappearance among my resident males this autumn resulted in the December census being considerably less than at the breeding-season, *viz.* in the proportion of 22 to 31; whereas, in previous years, the census appeared about equal. The vacant sites inside my area this autumn were very marked.

I may make a note about the stranger birds, seen during early autumn, that some give the impression of having taken

up residence by remaining there for a week, and perhaps even singing, but it appears that previous to the end of September any such acquisition may be illusory. Thus, I apparently made a mistake this year in ringing two such birds (70, 71), one in July and one in August ; I never saw them again.

I have had one case during my study of the male and female parents keeping together all the autumn. It was a pretty coincidence to see them. She always fed first. I was disappointed in them both disappearing, the female (43) in December (see table) and the male (45) in January.

As all my Robins knew me particularly well this winter, it was amusing when putting down food at some particular territory to hear a fluttering of wings overhead and find the extraordinary sight of nearly half-a-dozen Robins having adventured from their territories and being all consistently chased back along their various routes, never attempting to show any real fight. The Robin regularly makes a quite defined gliding flight, with wings outstretched, when proceeding to attack an intruding Robin.

I shall recapitulate my survey of the seasonal movements of my Robins, covering my whole study. I realise thoroughly that it is risky to generalize from such a small area, but two main points seem too definite to be chance, namely the general persistence of male parents, and the great movement among females.

1. After the breeding-season the females move *en masse*. Most are not seen again. I have looked for them outside my boundary as well as inside. This, of course, leaves much free ground. A very few reappear, occupying sites in mid-autumn.
2. In July and August a certain very small number of known young birds acquire sites (that is, while their plumage discloses their youth) ; the total observed was much less than half the number of previous breeding pairs, or say, much less than one young bird to each brood. Furthermore, out of ten such young birds whose sex was known there were nine males but only one female.
3. In September–December (chiefly October), of birds acquiring the remaining free ground a very few were previous female parents, as mentioned in (1) ; of the rest, where the sex was known, there were about three males to one female.
4. In January a very few females moved locally to mate with adjacent males ; another few departed, in number about equivalent to those that arrived in autumn ; but from

January to April there was a large arrival of females equivalent to the large departure after the breeding-season, see (1) above.

5. As to any *male* movements other than described above they did not occur at any definite season. They were in the main among males which had not bred with me. There was perhaps a slightly marked arrival in January but not equal to the autumn. Any departures were scattered over the year and seemed probably due to stress of competition and no doubt partly to death. In other words they were probably not voluntary.

Now in considering periodic movements (or quiescence) in the Robin population as observed by me, in so far as they may be reliable, we cannot suppose that they are peculiar to my little area, but on the contrary that they apply over the whole country. Therefore, discarding migration, the movements in respect to any area must be reciprocal both in time and numbers. But it is plain that if the above survey be correct, the movements of females were not reciprocal. The bulk of the females who left me at mid-summer were not replaced by other females, either then or after the concealment of the moult period. And the bulk of the females who arrived between January and April were much more than a replacement of the female departures in January. Besides, the latter were confined to January, whereas the former were spread over two or three months.

Again, if (2) and (3) above give a correct impression, then the female young birds largely, if not mainly, disappear.

There would, therefore, be an unexplained quantity of females absent between mid-summer and spring. If this is true how can it be explained unless by migration, and a migration mainly female? Is this conceivable? A certain migration of Robins out of the country is admitted; if this is at all general over the country, and if we admit that males in general keep to their ground, must not the migration be mainly female, and therefore corroborative of my experience? Any idea of females in quantity wandering freely about in November and December is entirely ruled out, as intruders of either sex into occupied ground are immediately chased.

MOULT.

I would comment on two aspects of the moult in addition to what I have already said on p. 251, Vol. XVIII. It is convenient to survey the moulting period with the tailless condition as datum. This condition appears to take a

consistent place some two or three weeks after the first signs of moult. My first comment is that I find some Robins moult very much later than others and for no evident reason. Thus, over 1924 and 1925, I have found the tailless condition to vary from June 27th to August 22nd, and indeed it would seem to divide itself into two series of birds with nearly a fortnight separating the latest of one set from the earliest of the other, but this may be only a coincidence.

In seeking among my birds for any grounds of sex or age for the big difference in moulting dates, I can so far see none except that I have no note of a female being in the late period. The latest date for a female being tailless was July 27th. This would rather corroborate the departure of females by indicating no late moult to prevent their departure.

My second main comment about the moult is as to how the moult finishes. It begins on chin and breast, then goes to wings and tail. After the tailless condition the tail quickly grows and then, though the bird is still a little untidy, yet to all appearance the moult is over. But this is not so at all. There follows a gap of two or three weeks with nothing to remark upon, when suddenly the sides of the head, the back of the head, and finally the front of the head develop a moult. There are thus about five weeks between the tailless condition and the head moult. With the later birds the head moult takes place in mid-September. Under the head moult the bird takes a most weird appearance, especially when the red band on the forehead is changing. A light-coloured, loose erection appears on the forehead and looks extremely odd, but this quickly passes and with this the moult ends. I think the head moult lasts altogether a week or ten days. For three birds I can compare their moulting positions in two successive years, 1924, 1925. With bird No. 9 his stages were about three weeks later in 1925 than in 1924. With bird 18 his stages were a few days later in 1925. With bird 20 his stages were a week or ten days later in 1925.

SONG.

As to female song, I corroborate what I said before by having just two records of a weak bar or two from two females in autumn, once from No. 50 on October 9th, once from No. 27 on November 15th after chasing an intruder.

I may record that the male regularly makes a peculiar short note of song or whortle as a war-cry preparatory to attack. When a bird I am watching makes this note I always know an intruder has come.

LENGTH OF LIFE.

I said above that I should make a reference to the age of Robins. A question occurred to me about birds in general where migration is not taken into consideration. What is the relation between the number of eggs or of probable surviving young and the average age of a species, if that species is to remain fairly constant in numbers? By average age, of course, I mean as the result of mortality from all causes. A species such as I am discussing must, I presume, be either fairly constant in average mortality and average brood survival or else be increasing or diminishing with great rapidity: because any appreciable annual difference per family would be enormously accumulative. In the following disquisition it is to be clearly understood that average age means the average age of birds that have survived to their first breeding-season. Assuming a constant census it follows, I think, that

a. If a bird lives n years then $\frac{1}{n}$ th of the birds die per year.

b. The young surviving from each year equal the birds that die.

I will also take into consideration the number of mateless birds. With the Robin, there seems a considerable number of mateless males, as I have also noticed in other species. In 1924, my table shows two such birds to nine pairs; in 1925, four or five such birds to thirteen pairs.

Let m = number of male parents or of pairs.

r = proportion of mateless birds (any sex) to the number of pairs.

y = number of young to each pair surviving to the next breeding-season.

then mr = number of mateless birds.

my = number of surviving young.

c. And the total number of adult birds at breeding-season is $2m + mr$.

From a, b, c, we have the equation

$$my = \frac{1}{n} (2m + mr)$$

$$\text{hence } n = \frac{2 + r}{y}$$

For the present case take the unmated birds to be only the unmated males, and in numbers as observed by me, or take $r = \frac{1}{4}$.

Take y as being somewhat less than 1 (see references in this study), say 0.8. Though indeed where my study suggested

0.8 this figure referred to the young surviving at early autumn, not at next breeding-season which would be less.

Then $n = \frac{2.25}{0.8} = 2.8$ years as the average life of a Robin.

There is some compatibility between this figure and the suggestion that the male Robin parents which left me this year had reached their span of life.

If instead of 0.8 we put y as representing *two* young birds to each pair of parents, which might be called a more natural guess (without any data) than my 0.8, then

$$n = \frac{2.25}{2} = 1\frac{1}{8} \text{ years}$$

as the average life of a Robin. If more than one brood be common elsewhere then we still further reduce the average life to almost an absurdity. This shows that if there is anything sound in my statement of the case, one must either drastically cut down the surviving young birds or else put the average age at a much smaller figure than is generally supposed. Even allowing for considerably more mateless birds in the above equation, it does not help us very much. And what about species which while laying a number of eggs seem to have much fewer enemies than a Robin?

It is well known that, in captivity, small birds such as Chaffinches, Bullfinches, Skylarks, etc., not infrequently attain an age of six to ten years, and ages of twenty-five and even thirty years are on record. A. R. Wallace, in *Darwinism* (p. 26), speaking of the struggle for existence as concerning such birds as the Redbreast, Sparrow, the four Common Titmice, the Thrush and the Blackbird, says such birds as these often live from fifteen to twenty years in confinement, "and we cannot suppose them to live shorter lives in a state of nature when unmolested; but to avoid possible exaggeration we will take ten years as the average duration of their lives." Nevertheless, I think that the words "when unmolested" are contrary to a state of nature and this must just make the whole difference.

In the *British Birds* Marking Scheme (see Vol. XIX., pp. 276, 277), the oldest ringed bird so far under the scheme is a Heron nearly 16 years of age; there is a Willow-Warbler of $3\frac{1}{4}$ years; a Mallard of $6\frac{1}{2}$ or $7\frac{1}{2}$ years at least; and a Sandwich Tern of 6 years.*

*This paper was written previous to Mr. H. F. Witherby's article "On the Duration of Life in Birds" (*antea* p. 71).

With reference to the proportion of surviving young birds, I happened when writing in the *Irish Naturalist* in January, 1921, to refer to my experience of the misfortunes of nests, saying that at least half of them and probably two-thirds will come to a bad end.

This drew from one of the editors, Mr. Praeger, in February, 1921, a characteristically accurate record of the history of a large number of nests observed by him (though some forty years ago), giving the final result in percentages for those—unfinished, deserted, destroyed, and young safely fledged. He took one particular year's nests as having the most complete record. There were about 263 nests in that year whose history was known. About half of them were found within the confines of "villadom" (where the misfortunes were higher), the other half in the open country. (My own observations were in the open country.) Those species which had a good number of nests observed (between 11 and 65 each) were in order of number—Blackbird, Chaffinch, Greenfinch, Magpie, Hedge-Sparrow, Song-Thrush, Robin, Wren, Yellow-hammer, Wood-Pigeon.

For the whole 263 an average of 37 *per cent.* had the young safely fledged; 63 *per cent.* were in vain. The lowest percentage was the Song-Thrush with 11 *per cent.* safe; the highest was the Robin (17 nests) with 48 *per cent.* The Blackbird with most nests (65) was 32 *per cent.* And even with the Magpie (20 nests), where the percentage might be expected high, it was only 40 *per cent.*

Thus, to return to our argument, there are some grounds for assuming on a large scale only one-third of nests to have young safely fledged from the nest, if so many. What then would be the final proportion of young which survive the many risks of adolescence, including existence until the next breeding-season? With one brood of five to each pair $\frac{5}{3}$ would be fledged, and if, say, half that number survive to next breeding-season or $\frac{5}{8}$, this gives us again the figure 0.8 used above.

Subjoined is a complete list of the marked birds :—

No. and sex where known	First noticed in occupation	Date Marked	Mate in 1923	Mate in 1924	Mate in 1925	Not seen since date below or extant	Notes.
1, 3, 4, 5, 7, 8	—	Oct. Nov. Dec. 1922	—	—	—	Dec. 1922 or before —/8/25 —/1/23	Several were probably not true residents when ringed. No. 8 died.
2 M 6	— —	—/10/22 —/11/22	10 —	34 —	34 —		

No. and sex where known	First noticed in occu- pation	Date Marked	Mate in 1923	Mate in 1924	Mate in 1925	Not seen since date below or extant	Notes.
9 M	—	14/1/23	14	36 and ano- ther	66	Extant	36 was killed, See recent history of 9 in present article.
10 F	—	21/1/23	2	—	—	-/5/23	Absent between 6/23 and 2/24.
11 F	—	4/2/23	Not mar- ked	19	—	24/7/24	
12	—	8/2/23	—	—	—	Date marked	Probably non-resident fe- male.
13	—	4/3/23	—	—	—	-/5/23	Probably a female parent 1923.
14 F	—	4/5/23	9 and 17	18	—	24/6/24	Absent between 6/23 and 2/4/24.
15 F	—	8/5/23	16	—	—	-/1/24	Absent between 7 and 10/23.
16 M	—	9/6/23	15	Not mar- ked	?	—	Not sufficient data.
17 M	—	25/6/23	14	—	—	—	-/6/23
18 M	—	30/7/23	Born	14	67	Extant	Lost a foot 9/24.
19 M	2/7/23	9/9/23	Born	11	64	28/8/25	
20 M	8/8/23	12/9/23	Born	27	27	15/11/25	Hardly a resident.
21 M?	8/8/23	16/9/23	Born	None	—	5/12/24	
22 M?	—	22/9/23	—	None	None	27/5/25	No proper data. Evidently ejected.
23	17/6/23	23/9/23	Born	—	—	-/1/24	
24	5/10/23	13/10/23	—	—	—	-/10/23	No further data.
25	8/10/23	22/10/23	—	—	—	-/1/24	
26 M	—	26/10/23	—	37	None	20/10/25	400 yards between the breed- ing and autumn terri- tories, 1924.
27 F	5/11/23	16/11/23	—	20	20	1/1/26	
28	—	18/11/23	—	—	—	9/2/24	Absent (ejected?) between 7/5/25 and 26/8/25.
29	1/11/23	22/11/23	—	—	—	-/1/24	
30	—	—	—	—	—	—	One foot sore and rings removed 29/11/25.
31 M?	30/12/23	24/1/24	—	—	—	-/4/24	
32 M	28/10/23	3/2/24	—	35	—	14/6/24	Absent between 15/11/24 and 25/2/25. Had acquired a female 14/3/26.
33 F	20/2/24	2/5/24	—	Not mar- ked	—	—	
34 F	3/2/24	1/3/24	—	2	2	-/6/25	Ejected?
35 F	16/2/24	3/3/24	—	32	—	1/12/24	
36 F	8/3/24	9/3/24	—	9	—	Killed	See departure in this article.
37 F	4/3/24	12/3/24	—	26	—	27/7/24	
38 M	19/3/24	28/3/24	—	40	65	26/9/25	Absent between 15/11/24 and 25/2/25. Had acquired a female 14/3/26.
39 M	19/3/24	19/5/24	—	Not mar- ked	49	Extant	
40 F	4/24	22/5/24	—	38	—	14/6/24	Ejected?
41 M?	17/7/24	24/7/24	—	Born	None	Extant	
42	6/24	1/8/24	—	Born	—	10/8/24	See departure in this article.
43 F	7/24	26/8/24	—	Born	45	8/12/25	
44 M	23/8/24	30/8/24	—	Born	62	Extant	See departure in this article.
45 M	22/6/24	31/8/24	—	Born	43	1/1/26	
46	16/9/24	10/10/24	—	Born	—	15/11/24	See departure in this article.
47	17/10/24	31/10/24	—	—	—	24/1/25	
48 F?	24/9/24	2/11/24	—	—	—	18/1/25	See departure in this article.
49 F	23/10/24	2/11/24	—	—	39	-/6/25	
50 F	14/10/24	7/11/24	—	—	54	1/1/26	See departure in this article.
51 M?	27/10/24	15/11/24	—	—	None	Extant	
52 M?	11/11/24	15/11/24	—	—	—	28/4/25	See departure in this article.
53 M	23/11/24	13/12/24	—	—	60	-/6/25	
54 M	11/11/24	13/12/24	—	—	50	12/9/25	

No. and sex where known	First noticed in occupation	Date Marked	Mate in 1923	Mate in 1924	Mate in 1925	Not seen since date below or extant	Notes.
55 M?	14/12/24	21/12/24	—	—	—	14/2/26	Absent between 5/2/25 and 5/9/25.
56 F	-/1/25	4/2/25	—	—	57	Extant	Absent from 6/25. It rejoined previous male 6/2/26.
57 M	-/1/25	4/2/25	—	—	56	Extant	
58 M?	18/1/25	7/2/25	—	—	—	Extant	Absent between 16/3/25 and 21/9/25. Last seen shifted to adjacent site.
59 F	-/1/25	20/2/25	—	—	63	Extant	Apparently near outside my border during autumn 1925. Inside after 23/12/25.
60 F	12/2/25	28/2/25	—	—	53	-/6/25	
61 F	—	3/3/25	—	—	Not marked	-/6/25	The unmarked male seems extant.
62 F	7/3/25	14/3/25	—	—	44	-/6/25	
63 M	23/2/25	19/3/25	—	—	59	Extant	
64 F	8/3/25	20/3/25	—	—	19	-/6/25	
65 F	20/3/25	26/3/25	—	—	38	-/6/25	
66 F	3/4/25	15/4/25	—	—	9	-/6/25	
67 F	20/3/25	10/5/25	—	—	18	-/6/25	
68 M?	28/4/25	25/5/25	—	—	None?	-/5/25	
69 M?	21/7/25	11/8/25	—	—	Born	Extant	
70, 71	21/7/25	19/8/25	—	—	Born	-/8/25	Should not have been marked, not truly resident.
72 F	1/9/25	9/9/25	—	—	—	Extant	Mated with 75 for 1926.
73 M?	17/9/25	4/10/25	—	—	—	8/12/25	See details this article.
74 M?	26/9/25	7/10/25	—	—	—	Extant	
75 M	11/9/25	28/10/25	—	—	Probably Born	Extant	Mated with 72 for 1926.
76 M?	28/8/25	28/10/25	—	—	—	Extant	
77 M?	29/10/25	10/11/25	—	—	—	Extant	
78 M?	—	10/12/25	—	—	—	10/1/26	See note to 81.
79 F	12/11/25	13/12/25	—	—	—	Extant	Unmarked mate for 1926.
80 F?	11/12/25	22/12/25	—	—	—	-/1/26	
88 M?	21/1/26	7/2/26	—	—	—	21/2/26?	Seemed to displace 78 on my border, but value of both records uncertain.

NOTES: The sexes queried are almost certainly correct, but there was no pairing to verify.

56, 57 and 59, 63 had their sexes reversed in previous table.

55 appears to have been a male; I referred to it on p. 122, Vol. XIX., as a probable female. The error is of no effect.

THE EGG-DEVOURING HABIT OF THE CUCKOO.

BY

GEO. R. HUMPHREYS, M.B.O.U.

ALTHOUGH quite a lot of information regarding the breeding-habits of the Cuckoo (*Cuculus c. canorus*) has been published during the last five or six years, and several new and important facts respecting the manner in which the egg is deposited in the nest of the fosterer have been revealed, practically nothing has been said about its egg-devouring habit.

Referring to this question in his monograph on the Cuckoo, published in 1892, Dr. E. Rey of Leipzig says: "In agreement, probably with all other oologists, I consider the statement that the Cuckoo eats the eggs which it takes from a nest to be a fable."

Mr. E. P. Chance, in *The Cuckoo's Secret*, published in 1922, quotes numerous instances where the Cuckoo was seen to carry off an egg, but it would appear that on none of these occasions was she observed in the act of eating the egg. He tells me, however, that on many occasions in 1922 he watched the same Cuckoo "A" in her fifth season devour the egg she had taken from the nest of her dupe, as well as many Yellowhammers' (*Emberiza c. citrinella*) eggs, to which, he adds, that particular Cuckoo seemed extremely partial.

It occurs to me that the following incident which came under personal observation on June 20th, 1926, in a field off the high road, about three miles from the town of Wexford in that county, may be of interest.

At 3.40 p.m. (B.S.T.), or roughly 2.15 p.m. by the sun, a Cuckoo, accompanied by four Meadow-Pipits (*Anthus pratensis*), was seen to float down from a tall willow tree in a hedgerow. After two unsuccessful attempts it became evident she had reached her objective, as she was seen to rise from the grass carrying an egg in her beak and followed by one Pipit. Flying towards the same hedgerow she perched on a hawthorn directly facing me, and in full view. The Meadow-Pipit took up a position at right angles, but quite close to the Cuckoo, and in such a way that both birds' heads were level with each other. Without delay the Cuckoo tossed up her head and swallowed the egg, having made no attempt to smash it. The whole act was performed by rapidly jerking the head and neck backwards and forwards. After doing this she ruffled her feathers, shook herself, and disappeared over the hedgerow, followed by the Meadow-Pipit, which had carefully watched the whole procedure.

On examining the spot from where the Cuckoo rose the grass was found to be eighteen inches in height. A portion was so beaten down that it formed a channel about two-and-a-half feet in length by nine inches in width. In it were lying five of the Cuckoo's feathers. Mr. Witherby, who kindly examined them, says that there is little doubt that they came from the nape or the back of the neck. As the channel followed the direction of the Cuckoo's flight when approaching, I expected to find the nest at the farthest end. Instead, the nest, although in line with this end of the channel, was separated from it by a ridge of standing grass. My attention was attracted to the nest by the grass on the edge being flattened out in the same way as described by me on a previous occasion when the Cuckoo was seen to sit on the nest (*Irish Naturalist*, Vol. XXXIII., pp. 119-21). I should mention that the Cuckoo was on the ground nearly ten minutes and it is obvious that she experienced some difficulty in locating the exact position of the nest, and during that time was fiercely attacked by the Pipits. The nest contained two Meadow-Pipit's eggs, quite cold, and a Cuckoo's egg, quite warm.

NOTES

NEW BREEDING RECORDS FOR BRECONSHIRE.

I have this year found the following species of birds breeding near my home at Garth, Breconshire. The particulars are as follows:—

SOUTHERN GOLDEN PLOVER (*Charadrius a. apricarius*).

C/4 incubated eggs on May 14th.

C/4 fresh eggs on May 16th.

SOUTHERN DUNLIN (*Calidris alpina schinzii*).

C/4 and C/2 incubated eggs on May 25th.

HAWFINCH (*Coccothraustes c. coccothraustes*).

C/4 incubated eggs on June 19th.

RED-BACKED SHRIKE (*Lanius c. collurio*).

C/6 incubated eggs on June 7th.

ALEC T. WILSON.

[The nest of the Dunlin has, I believe, only once been found previously in Brecon. On June 10th, 1903, Mr. J. A. Walpole Bond found a nest with four eggs on a big flat on a hill top, about 1,000 feet above the sea, where he had previously noted at least two pairs. With regard to the other species mentioned, Cambridge Phillips, in the *Birds of Breconshire* (1899), mentions several localities where the Golden Plover breeds. He also quotes at least one definite instance of the breeding of the Hawfinch and describes the Red-backed Shrike as common.—F.C.R.J.]

MUD-DAUBED EGGS OF JACKDAW.

WITH reference to Mr. J. H. Owen's note on this subject (*antea*, p. 23), on May 1st, 1908, at Woodhouselee, Midlothian, I found a Jackdaw's nest about eighteen feet from the ground in the bole of an elm tree. It contained a clutch of five eggs which were completely coated over with a layer of mud—not a vestige of shell showing. I removed them, and before they could be blown it was necessary to place them in water in order to soften the mud which was hard baked on the shells. Four years previously my friend, Mr. David Hamilton, found a clutch under exactly similar conditions in the same hole. The eggs in both instances were perfectly fresh, which disproves any theory that the mud is gradually accumulated during incubation.

J. KIRKE NASH.

[The evidence published in this volume and previously (see

Vol. IV., pp. 176, 214, 250 ; Vol. VIII., p. 14 ; Vol. X., p. 40), seems to show that the habit of daubing their eggs with mud by the Jackdaw, though widespread, is confined to certain individuals.—EDS.]

UNUSUAL SITE OF GOLDFINCH'S NEST.

THIS year (1926) a pair of Goldfinches (*Carduelis c. britannica*) built their nest in ivy growing on one of the stone bridges which span the River Dart, Devon. The nest, which was only about 3 feet 6 inches from the ground, contained young birds on May 7th.

STANLEY PERSHOUSE.

THE NESTLING BEARDED TIT.

WHEN examining a nest-full of recently hatched Bearded Tits (*Panurus biarmicus*) this summer at Hickling Broad, Norfolk, I saw that the coloration of the inside of the mouth was wrongly described in the *Practical Handbook* (Vol. I., p. 257). On looking up the subject I find that I entirely overlooked Mr. W. P. Pycraft's excellent description and figures in *British Birds*, Vol. II., pp. 58-9. This description should have been quoted in the *Practical Handbook*. Mr. Pycraft states that there are four rows of pearly-white, conical, peg-like projections on the palate, two rows on either side of the middle line. These tooth-like bodies are not of uniform size and are set in a background of black surrounded by a rich carnelian-red, the whole being framed in by the lemon-yellow gape-wattles, which are not very strongly developed. The tongue is black with a white tip and a pair of white spurs at its base. I think Mr. Pycraft's description cannot be improved, and this has been confirmed by Mr. J. Vincent and Mr. Roland Green, who also kindly examined the nestlings' mouths at my request. Mr. Green referred to the colour called carnelian-red by Mr. Pycraft as rose-madder and I had noted it down as a rather deep flesh-colour. I might add that the skin of the upper-part of the nestling is dark, almost blackish, flesh-colour, somewhat like that of a young Cuckoo but not so blackish. It seemed to me that the "teeth" on the palate were set pointing slightly backwards and they might have some connexion with the retention and swallowing of food.

H. F. WITHERBY.

CONTEST FOR NESTING SITE BETWEEN SPOTTED FLYCATCHER AND SWALLOW.

THIS year a pair of Westmorland Swallows (*Hirundo r. rustica*), returning to their former nesting site on a beam inside a barn, whose door was usually shut, had to fight for possession

of their nest with a Spotted Flycatcher (*Muscicapa s. striata*). The fight lasted the whole of one day, the Swallows eventually winning and raising a brood which flew early in June. It is, I think, somewhat unusual for this Flycatcher to nest inside a closed building.

H. W. ROBINSON.

EARLY BREEDING OF THE GRASSHOPPER-WARBLER IN SUSSEX.

MR. J. A. WALPOLE-BOND has kindly furnished me with some particulars of the nesting dates of the Grasshopper-Warbler (*Locustella n. naevia*) in Sussex from 1920 to 1926 as observed by himself and Mr. P. B. Smyth. Some of these records are so remarkable that it seems advisable to give details. The latest date for a clutch of fresh eggs was May 22nd, 1925 (c/6 J.A.W.B. & P.B.S.), but many nests were found with full sets between May 9th and 20th. On May 25th, 1923, a nest with the unusual number of seven young about four days old was found. Allowing fourteen days for incubation, this would make the date of the full clutch about May 7th and the first egg would have been laid on May 2nd.

In the year 1926, Messrs. Walpole-Bond and Smyth met with a nest containing five young and an addled egg on May 16th. The young were about two or three days old, so that the eggs must have been laid during the last days of April! On the same day, another bird was also seen feeding young, but the nest was not found till May 25th, when they were just fledged. This was probably slightly earlier than the previous nest. A third nest with young a few days old was also discovered on May 19th, yet full clutches of fresh eggs were found in the same district up to May 19th and 20th.

It is evident from the above records that, exceptionally, the first eggs may be found as early as April 24th or 25th, and full clutches by the end of April on the south coast of England, nearly four weeks earlier than the average date for the Midlands and North of England.

F. C. R. JOURDAIN.

EARLY BREEDING OF GRASSHOPPER-WARBLER IN SOMERSET.

ON May 26th, 1926, I found a nest of Grasshopper-Warbler (*Locustella n. naevia*), containing two young about three days old and four addled eggs, in Somerset. Allowing three days for the age of the chicks, and fourteen days for incubation, the first egg was laid on May 5th!

I am wondering if the unusually early date had anything to do with the infertile eggs.

STANLEY LEWIS.

PROBABLE ALPINE ACCENTORS IN HAMPSHIRE.

ON January 19th, 1926, at Beaulieu, Hampshire, during the second day of a howling blizzard (the direction of which at Beaulieu was from the S.S.E.), three strange birds appeared among the Chaffinches and Sparrows, which came to food put down during the winter outside my house. They were first noticed by Sergt.-Major Adams and were seen many times by myself and also by Col. C. Hodgkinson. They were fairly tame and remained near the house from January 19th to 21st, and were twice within ten feet of the window.

The points noticeable about the birds were their speckled throats, white wing-bars, deepish red-brown flanks, yellowish beaks and the colour of their legs, which was of a rather pale, but dirty salmon shade. On the ground they had a rather low, sliding movement, almost a crouch, but difficult to describe. They were larger than Chaffinches and their tracks were also larger and quite distinct, with a longish hind claw.

Checking the appearance of the birds from Coward's *Birds of the British Isles* we had little doubt that they were Alpine Accentors (*Prunella collaris*).

CECIL PADDON.

DIPPER IN SURREY.

IN the afternoon of May 3rd, 1926, we saw a Dipper (*Cinclus c. gularis*) on the banks of the river Mole, near Leatherhead Railway Bridge. When disturbed, the bird flew off down stream, and we had a clear view of it. We have both seen a good many Dippers in the north, but never before in Surrey. We have not seen the bird again and it was no doubt a passing visitor.

P. F. DAGGER.

A. L. MACKIE.

GOLDEN EAGLE AND MARSH-HARRIER IN IRELAND.

THE Golden Eagle (*Aquila chrysaëtus*), which was well known about the Adara Mountains, co. Donegal, for the last ten years, was caught in a trap laid beside a dead sheep to destroy foxes on April 2nd, 1926. As far as can be ascertained, this is the last remaining Irish Eagle; it was a female with atrophied ovaries past breeding.

Thirty years ago the Golden Eagle was a common species, breeding in Donegal, Clare, Mayo and Kerry. It was gradually exterminated, principally by poison.

Another Raptor which has entirely disappeared is the Marsh-Harrier (*Circus æruginosus*), which was common on the large lakes. Although Lord Castletown strictly preserved the last pair on his estate in Queen's county, when I visited

the place in May, 1908, by invitation, I only saw one solitary Harrier, and Mr. Carroll tells me he saw a single bird at the same place in 1922.

Up to ten years ago we always had one or two sent for preservation, but since that time we have never had a single specimen.

W. J. WILLIAMS.

[The extinction of these birds as breeding species in Ireland is indeed a sad event to have to chronicle (*cf.* Vol. XIX., p. 211).—EDS.]

TUFTED DUCK BREEDING IN WILTSHIRE.

ON June 29th, 1926, I saw a pair of Tufted Duck (*Nyroca fuligula*) with two ducklings on a pond within ten miles of Marlborough. On July 19th, there were five ducklings to be seen. I believe this is the first time that Tufted Duck have been recorded as nesting in Wiltshire.

There were two pairs on the pond, but whether both nested this year is impossible to prove.

S. T. C. TURNER.

NEW NESTING-LOCALITY OF SANDWICH TERN IN CUMBERLAND.

PREVIOUS to this year the Sandwich Tern (*Sterna s. sandvicensis*) has only nested in the one locality (Ravenglass) in Lakeland, but in 1926 a pair bred in another locality in Cumberland and hatched out one nestling on June 30th.

R. H. BROWN.

YOUNG SANDWICH TERNS GOING TO GROUND IN HOT WEATHER.

THAT the chicks of both the Sandwich Tern (*Sterna s. sandvicensis*) and Common Tern (*S. h. hirundo*) go underground into rabbit-holes when disturbed or in hot weather I have known for some years, but they are nearly always within arm's length of the entrance. During my visit to a colony of Sandwich Terns in the heat wave during the last few days of June up to July 2nd, I found that on the latter date all these, except a few just hatched, were so far down as to be only reached by digging. None were less than six feet down or in, and the majority much deeper and quite out of reach. They came to the entrance to be fed, as shown by the amount of "whitewash" at the entrance of such bedaubed holes, for Sandwich Terns are dirty birds in this respect. In such distress were the few newly hatched ones in the intense heat that I placed them under overhanging sods or fronds of heather for shelter. On June 22nd, nettles, thistles and

ragwort were luxuriant among the nesting scrapes, yet ten days later all these lay dead and burnt with the heat.

The young of one colony all flew during the first three days of June, another adjoining had young in all stages and eggs on June 22nd, and still some eggs on July 2nd, whilst a third off-shoot had only one chick out on June 22nd, all these being hatched and far underground on July 2nd, except one.

One colony only had the usual fringe of dozens of dead young Black-headed Gulls round it, their heads pierced by the sharp beaks of the parent Sandwich Terns, for trespassing within their domain.

The chick of the Sandwich Tern is most hardy, as it is the exception to find any deaths among them as it is among Common and Arctic Terns, where the death-rate is sometimes very high.

H. W. ROBINSON.

UNLIKELY RECORDS IN YORKSHIRE.—In the Yorkshire Naturalists' Union Report for 1925 (*Nat.*, 1926, p. 11), some quite extraordinary records are published on the authority of Mr. V. G. F. Zimmermann. A Hobby's nest, near Terrington (Yorks), would be a rare event in itself, but we are told that there were four young (a very exceptional number) on July 9th (an extraordinarily early date) and, further, that the nest contained "fifteen Partridge wings, four Blackbird wings, six Thrush wings, two wings of Lapwing, and the skin of a rabbit." As no comment is made in the Report on this observation, we think it as well to draw attention to its very remarkable nature.

CARRION-CROW'S NEST WITH EIGHT EGGS.—In the *Field*, 22.iv.26, p. 682, Mr. Stanley Lewis records finding a nest of Carrion-Crow (*Corvus c. corone*) in an oak tree in Somerset, with eight eggs on April 12th, 1926. The eggs showed some variation but there was nothing to suggest the presence of two females. A somewhat similar case was recorded by Mr. R. W. Calvert from the Oxon. and Gloucester borders on May 3rd, 1924 (*Rep. Oxf. Orn. Soc.*, 1923-24, p. 23), but in this case five eggs were of one type and three of another, so that probably two hens were responsible for the abnormally large clutch.

ERYTHRISTIC EGGS OF SKY-LARK.—Surg. Rear-Admiral J. H. Stenhouse records a clutch of four reddish eggs of the Sky-Lark (*Alauda a. arvensis*) taken on Fair Island in May, 1925, and now in the Royal Scottish Museum (*Scot. Nat.*, 1926, p. 91). They are described as being rather lighter than normal red

eggs of the Tree-Pipit. In a previous paper on "Erythrism in Eggs of British Birds" (*antea*, Vol. VII., p. 249), we were only able to record one instance of this type (c/3 from the Orkneys in Mr. Bunyard's collection), but we have recently seen a set of three from Denmark in the Lehn Schiøler collection at Copenhagen and have also seen a set of three red eggs from Suffolk ascribed by the finder to this species.—F.C.R.J.

LITTLE OWL IN LANCASHIRE.—Mr. A. R. Davidson informs us that an adult Little Owl (*Athene n. vidalii*) was picked up dead at Woodvale, a village lying between Ainsdale, Formby, and the western side of Downholland Moss, on July 28th, 1926.

OSPREY IN SCOTLAND IN JUNE.—In the *Field* (July 1st, 1926, p. 31), Mr. N. Maclachlan states that in the evening of June 2nd, 1926, he and the vicar of Wakefield, while fishing the River Don at Glenkindie (Aberdeenshire), saw an Osprey (*Pandion haliaetus*) about 100 feet up carrying a fish. The bird was being "mobbed" by a number of Lapwings, some Oyster-Catchers, Redshanks, and other birds and after rising in a wide semi-circle made off to the north-west. The occurrence of an Osprey at so late a date in the Highlands is of considerable interest. One was recorded in 1924 as visiting Taymount (Fifeshire) about April 26th (*Scot. Nat.*, 1925, p. 75).

REVIEWS

Report on Scottish Ornithology in 1924, including Migration. By Evelyn V. Baxter and L. J. Rintoul. (Reprinted from *The Scottish Naturalist*, 1925, pp. 73-88 and 109-130.)

This annual Report, which has been issued some time and should have been noticed before, has been compiled in the usual form and careful manner associated with these authors' work for many years. The following notes of interest have not previously been mentioned in our pages; all the dates refer to the year 1924.

SCARLET GROSBEAK (*Carpodacus e. erythrinus*).—One at Fair Isle, September 9th and 12th.

ORTOLAN BUNTING (*Emberiza hortulana*).—One at Fair Isle, May 16th.

GREAT SPOTTED WOODPECKER (*Dryobates m. anglicus*) are noted as still spreading in Scotland, and breeding is recorded from north Fifeshire, Morayshire, and east Inverness-shire.

BITTERN (*Botaurus s. stellaris*).—An unusual number were reported in the southern half of Scotland, mostly in January and in a state of exhaustion.

SNOW-GOOSE (*Anser hyperboreus* subsp.?).—A Snow-Goose was seen with Pink-footed Geese on the shore at Tayport (Fifeshire) on January 11th.

GADWALL (*Anas strepera*).—Downy young were seen at Biel (Haddington) on July 7th, this being the first record of breeding in east Lothian. The bird bred again in south Fifeshire, where it is hoped it may become established.

WIGEON (*Anas penelope*).—These are referred to positively as having bred for the last three years in Bute, but although the evidence is strong it does not seem to us to be conclusive. The Rev. J. M. McWilliam, in his original note (*Scot. Nat.*, 1924, p. 162), states that Wigeon "have brought their young to Quienhoch," but he does not state the age of the young or give the months of their appearance. The statement is on the evidence of two gamekeepers, but Mr. McWilliam has, himself, seen two pairs of old birds on May 29th, 1916, and a drake on June 4th, 1924.

PINTAIL (*Anas a. acuta*).—A female with young was seen at Kingoodie (Perthshire) on June 14th.

RED-THROATED DIVER (*Colymbus stellatus*).—This is stated to be breeding in Mull.

GREENSHANK (*Tringa nebularia*).—Bred in Aberdeenshire, the first record for the Dee area.

WHIMBREL (*Numenius phaeopus*).—A record is quoted from the *Field* (Sept. 11th, 1924, p. 402) of the breeding of the Whimbrel near Newtonmore, in Inverness-shire. Mr. Dugald Macintyre was the observer, and he states that he saw the old birds, which flew round in a state of anxiety, uttering their call, which he at once recognized. Eventually he found a young one which was almost "fledged" but not larger than an adult Golden Plover. He does not, unfortunately, give other details which would afford absolute proof that his identification was correct. There is no authentic case of the Whimbrel breeding on the mainland of Scotland, and it will be interesting to see if this observation is confirmed in the future.

ROSEATE TERN (*Sterna d. dougallii*).—Two were seen in one locality on May 17th, and another at a different locality on the 19th, both on the east coast. Breeding, however, was not proved.



LETTERS



DISAPPEARANCE AFTER NESTING OF THE PIED FLYCATCHER.

To the Editors of BRITISH BIRDS.

SIRS,—Living as I do in the heart of a Pied Flycatcher (*Muscicapa h. hypoleuca*) district I have had ample opportunities for many years past of watching them under the most favourable conditions. It must be admitted that in the great majority of cases my observations have been on birds occupying artificial nesting boxes, for no species takes more readily to these; but in consequence I, and many of my neighbours, have them under our eyes at all hours of the day during the nesting season, and no birds can be easier to observe. But there is one problem that I have never yet been able to solve. What becomes of the Pied Flycatchers, both old and young, as soon as the latter have left the nest? In the case of the Spotted Flycatcher (*M. s. striata*) and most other small birds, both old and young are to be seen about for some time, even for weeks, after the young have left the nest, but with the Pied Flycatcher it is never so, and from the moment that the young ones leave the nest the whole family vanishes. In an experience of over thirty years I have never yet succeeded in seeing a Pied Flycatcher except at the nesting site; once the young have flown they are never seen again until the following April. What becomes of them? Can anyone living in a Pied Flycatcher district throw any light on the subject?

A. ASTLEY.
FRESHFIELD, AMBLESIDE.

NESTING OF THE MARSH-WARBLER.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Hale's note on the nesting of Marsh-Warbler (*Acrocephalus palustris*) in Kent, I see he writes of the "usual Meadow-sweet . . . growing close by . . ." He then adds further remarks *re* the prevalence of this plant in the vicinity of all but one nest found by him. I have had considerable experience of this species, both in Northern France and Hungary, and the impression I have gained is that the occurrence of meadow-sweet has not necessarily anything to do with Marsh-Warblers. It seems to me that it is merely an indication that the locality is a suitable one *where these Warblers are not very plentiful*. Where the species is quite common I have found numerous nests in nettles on dry ground—in the vicinity of willow bushes. On one occasion, in France, I even found a nest suspended in a wild mustard plant growing in a crop of rye on a hill top *well away from water*! On another occasion I saw and heard undoubted breeding birds in a field of well-grown beans, also *well away from water*. The commonest plant utilized, both in France and Hungary, was found to be the nettle, but a well-favoured site was dead reed, up which grew convolvulus (bind-weed), the dead stems of convolvulus often being used as a nest lining. I agree that the song, nest and eggs are unmistakable. The song mimicry is simply amazing. The rye-field male bird was a perfect genius at impersonating the Quails, which were common neighbours!

W. M. CONGREVE.
HAFOD, TREFNANT, 4th August.

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THE EGGS OF THE SPARROW-HAWK.

BY

J. H. OWEN.

THE eggs of the Sparrow-Hawk (*Accipiter n. nisus*) usually number four, five or six. Seven is distinctly uncommon and higher numbers must be very rare. In my opinion a clutch of less than four is the produce of a very old bird whose powers of reproduction are failing. I have found three in a nest occasionally and only once a pair. In the above remarks I refer, of course, to the first laying of a bird in a year; that is, the bird has not previously been robbed. A bird that has been robbed usually lays at least one less in the second set and less still in the third set. In 1913, I took six from a nest and the bird built again in a tree suitable for photography. As A. P. Adams wished to photograph the bird we obtained leave for the nest to be left and the second set consisted of six eggs. Adams and Alstone, a friend of his, both climbed up to it but I did not do so myself. This is the only case of six being followed by six that has come under our joint observation. I have one or two cases of five followed by five and four by four, but a drop in numbers is far more usual. I have notes of six followed by three and five by two. The first case was the produce of a young bird and the second of a very old one. The latter dropped to four eggs the next year, followed by two, and the same the following year again. It is always a matter of difficulty to get sets from the same bird many years in succession. Many birds get killed or, if robbed repeatedly, they often change their breeding-ground. One bird, though robbed every year, used the same spinney from 1917-24 inclusive. I found the nest after the young had gone in 1917. The spinney was only a long narrow slip and there was not a tree in it as thick as a man's thigh. At first she nested very low down, about eight feet from the ground, but year after year resorted to higher sites until at last she used the highest possible. I took her eggs from 1918-24, but usually gave them to boys who helped me. She had probably been killed before May, 1925, as I could not find a sign of her in the spinney or elsewhere.

The eggs vary very much in colour and shape. The breadth is great compared with the length, so much so that some seem very round. The majority are pointed, if very bluntly, but occasionally eggs are found shaped exactly alike at both ends. In comparatively few sets are all the eggs long and narrow. The ground-colour is usually quite white, but fairly often there is a faint tinge of blue. The inside of a fresh egg is a beautiful

deep green which seems quite permanent after the egg is blown ; it, however, fades as the egg is incubated, and if an egg with a well-developed chick in it is blown, the green will not be nearly so bright. The shell from which a chick has hatched barely shows green at all.

The markings vary from very dark brown or chocolate, one might almost say black in fact, down to a very pale light brown. At Felsted I find paler markings more common than dark. In a few sets the markings have a violet tinge in them, but I think this variation is uncommon. The placing of the marking in nearly all sets varies very much. Sometimes it is all collected in a cap at one of the ends ; sometimes it is in a zone, and sometimes splashed about in splotches and spots anyhow ; quite frequently eggs of all these types will occur in the same set. A set of darkly marked eggs may contain one lightly marked, but the reverse is unusual in my experience. One seldom sees a set with markings evenly distributed over all the eggs of the set. Such a set is the produce of a mature bird presumably in the best of health. I have a few sets in which one of the eggs is completely covered with markings of uniform colour, but I have seen very few such eggs ; they are so well covered that it is almost impossible to see any ground-colour ; more after the type of the eggs of the Kestrel, Merlin and Hobby than the Sparrow-Hawk. Some sets have an absolutely unmarked egg. If this belongs to a first laying it is certain to be the last egg of the set ; the supply of pigment has run out. It needs rather careful examination to say anything of the age of the bird which produced it. If the other eggs have medium bright markings it is probably the produce of a young bird. If they are distinctly bright it is probable that the bird is young but mature. I have two sets taken from the same bird in one year in which the last of the first set was not marked ; all the second laying were marked and she would probably not lay another unmarked egg. These would most probably be the first eggs she had laid. In another case the last egg of four was not marked ; this time, however, it was the produce of an old bird, and in succeeding years her last egg was always unmarked. I have two sets of her eggs, laid in successive years. The second laying is as a rule much less well marked than the first, but now and then a strong vigorous bird will produce well-marked eggs in the second set, though, in my experience, never up to the standard of the first lot. It is much more usual for the eggs to be very poorly marked, increasingly so as the set nears completion, and ending with an absolutely unmarked egg. The bird



VERY OLD HEN BRINGING MATERIAL TO THE NEST AFTER INCUBATION HAD LASTED THIRTY DAYS.

(Photographed by J. H. Owen.)



HEN BRINGING MATERIAL FOR NEST SOME DAYS AFTER THE EGGS HAD ALL HATCHED

(Photographed by Sir Thomas Lewis, F.R.S.)

which laid in the spinney mentioned above always finished her second laying with an unmarked egg. I saw her third set of eggs once or twice and the first laid of these were marked again, but I never took them or troubled her. Eggs sometimes show shell-marks of a much lighter colour than the surface markings. In many eggs, and often in exceedingly well-marked specimens, the markings skew round the egg as if the egg was being very slowly rotated as the markings were put on; as a rule only one, if one, of the eggs in a set has these skew markings; this is curious as I have seen Buzzards' eggs in which all the eggs in the set showed it plainly.

The size of the eggs varies very much. I have by me the measurements of 425 eggs. The average length is 38.86 mm. and breadth 31.22. The biggest eggs are 44.1×31.0 , 43.7×32.3 , 43.6×32.1 , 44.0×31.2 and 44.5×32.7 . This last is a very curious specimen as it was a single yoked egg, as far as I could tell, and was the middle egg of five of which the other four averaged 37.8×29.85 mm.

The smallest egg I have got is 34.2×27.5 mm., but this is rather unfair as it is the last egg of a third laying. Boys used to bring me very small eggs from birds that they robbed until the eggs became quite tiny, but I never kept them and the smallest measurement I can find is 36.2×29.3 . My bird's previous egg measured 38.0×31.3 mm. Three eggs in a second laying of a four-egg bird were 35.4×29.7 , 35.6×29.0 and 35.5×30.3 . Her first eggs were 37.0×31.2 , 35.4×30.8 , 35.8×30.9 , 36.0×29.5 , so that all her eggs were on the small side. Very few eggs of a first set measure less than 35 mm. in length. A bird produced one 34.8×30.1 in 1921, and another 34.4×31.1 in 1923. I could not find her nest in 1922 or again after 1923.

My average and biggest eggs are in size below those quoted in most books. The average is easily explained. My eggs contain quite a number of second layings and these eggs are often noticeably less than those in the first. Another point is that the eggs of the bird slightly decrease year by year. I have measurements of several sets from the same birds. The probability is that the majority of the eggs, from which the book averages were taken, were the produce of birds that had not been laying for more than three years, only one set from each, not many second sets and no third sets. I have no six-set with all the eggs over 40 mm., but one set has five and the sixth egg measures 39.4. I have six five-sets in which all the eggs measure over 40 mm. and in one case a second

set of four all measured over 40, and in fact averaged larger than the first set. I have one other set of four and one set of three (a second laying) which also reach this measurement. The smallest six-sets average 36.9×29.63 and 37.05×29.35 , the produce of different birds. A five bird averaged 36.2×30.3 in 1921 and 35.9×30.5 in 1923. A five bird averaged 36.3×29.9 in 1919 but only laid four eggs in 1921, which averaged 36.0×30.8 . As with everything else connected with the Sparrow-Hawk it is impossible to lay down a definite rule that the eggs decrease slightly year by year. My own experience is that this is generally so, but I have several exceptions. Soft-shelled eggs are exceedingly rare. This year (1926) one was laid in a set of five and the bird turned it out; some years ago a Kestrel did exactly the same thing.

In 1925 the keepers seemed to be more thoroughly at work in this neighbourhood and I found Hawks hanging in woods where they had not been molested, except by myself, for years. I had great difficulty in finding nests and had to extend my usual range very considerably to find eight nests, which provided forty-one eggs and the soft egg. These eggs averaged 39.55×31.7 . One of the birds behaved in an extremely interesting manner. I found the nest before she began to lay, but even at that early stage she whimpered when anyone went at all near the nest-tree. As she got eggs her uneasiness grew and she became more and more noisy. As she was nearing the completion of her clutch she used to dart at me repeatedly, missing my head by inches only, when I was standing in sight of the nest but quite forty yards from it. Very curiously, when she had finished laying, she became much more normal or had got used to being visited. She was a young bird laying her first set and I attributed her queer behaviour partly to nerves and partly to the fact that woodmen were busy in the woods near her and this kept her worried. Of the other seven, one only made any noise at all; the rest were all absolutely silent when the nests were visited.

I have mentioned the brightness of the markings on the eggs. I am of the opinion that this is a mark of youth in a bird and increases until the bird has reached a certain age; the markings on the eggs of old birds are dull and the eggs generally have a faded appearance even when taken quite fresh. It seems to me, too, that the sets which have paler markings have more brightness than the darker markings, although sometimes these are quite glossy.

An analysis of the measurements of thirty-four clutches of eggs, ascribed to fourteen females, shows some points of interest.

In nearly every case if the first layings alone are considered, there is a slight, but definite, decrease in size.

Bird.	Year.	Average size of eggs.	No. of eggs.	Notes.
A	1912	40.50 × 32.22	5	
„	1913	40.02 × 31.96	5	Markings darker and more distinct. Decrease in size.
B	1916	37.96 × 31.12	5	Last egg not well coloured.
„	1917	38.96 × 31.06	5	One of the few cases of increase in size (length). All eggs well marked.
C	1915	39.71 × 31.48	6	Last egg weakly coloured.
„	1916	39.83 × 30.90	6	(2nd laying 5 ; all poorly marked.)
„	1917	39.16 × 31.51	6	(2nd laying 5 ; all poorly marked.)
D	1918	38.38 × 31.40	6	(2nd laying 5 ; poorly marked but very pretty.)
„	1919	38.42 × 31.60	5	One egg missing ; perhaps drop- ped away from nest. (2nd laying 5 ; poorly marked.)
„	1920	37.51 × 31.21	6	Decrease in length and breadth.
E	1921	38.61 × 31.23	5	An oldish bird ; small eggs of dark type.
„	1923	35.88 × 30.50	5	Great decrease in size. (Failed to find 1922 nest ; wood over 50 acres.)
F	1921	39.85 × 32.50	4	
„	1922	39.75 × 32.65	4	No appreciable change in size.
G	1921	39.52 × 31.58	5	A second laying in 1919 averaged 38.62 × 30.10.
„	1924	37.20 × 31.56	5	Marked decrease in length.
K	1921	38.32 × 32.80	5	
„	1922	37.82 × 32.44	5	Decrease in length and breadth.

The following cases show the differences between first and second layings :—

H	1921	42.20 × 33.54	5	{ All fine eggs well marked. Increase of length. Probably a mature bird.
„	„	42.62 × 32.82	4	
I	1923	37.47 × 32.57	4	Last egg unmarked.
„	„	38.55 × 32.07	4	All marked. Increase of length. Young bird.
L	1922	39.16 × 30.42	5	Third egg abnormally large (44.5 × 32.7).
„	„	38.77 × 29.47	3	Decrease.
M	1918	37.30 × 30.62	5	From a really old bird ; in 1919 and 1920 she laid 4 and 2 only.
„	„	37.00 × 30.63	3	Slight decrease.
N	1923	40.33 × 32.22	6	Three sets from the same bird ; she changed woods for the second nest ; and used the old nest, which had been kicked down and lodged half-way for the third.
„	„	38.46 × 31.48	5	
„	„	37.33 × 30.20	3	Steady decrease in size.

FIELD-NOTES FROM LAKELAND, 1925.

BY

R. H. BROWN.

CARRION-CROW (*Corvus c. corone*).—Two pairs, breeding in localities at altitudes of three hundred feet and thirteen hundred feet above sea-level, had clutches of four eggs by April 8th. Of eleven nests found this spring, two had clutches of five, three had three, the rest four. One pair built about six feet from the ground in a hawthorn bush. A nest visited on May 17th held, besides the three young, a partly-eaten young Rook.

On April 25th, a Crow was flushed from a nest holding five Crows' eggs and one of a Tawny Owl (*Strix a. sylvatica*); the Owl's egg was removed and placed under a broody hen, but was infertile. As Crows are notorious egg-stealers it is strange they had not eaten this egg. Apparently there was an interval between the Crows finishing their nest and beginning laying, during which the Owls took possession and laid an egg, only to be ejected by the rightful owners.

ROOK (*C. f. frugilegus*).—Two rookeries were visited in April and one hundred and eighteen nestlings were ringed; these were distributed amongst fifty-three nests, which gives an average of 2.2 young per nest.

4 nests each held	4 young.
16 „ „ „	3 „
21 „ „ „	2 „
12 „ „ „	1 „

53 nests held	118 young.
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None of the nestlings were under a fortnight old, some were practically feathered, and it is probable that all were reared. There were some dozens of dead nestlings, averaging about ten days old, beneath the trees.

MAGPIE (*Pica p. pica*).—In 1924, a pair nested in an oak tree and reared one young. The same nest was used this year, a new lining added, and three eggs laid.

On February 6th, a party of eight birds was noticed in a hedge, pursuing one another, three making flights at intervals. Seven birds were pursuing each other about some trees at dusk on April 16th, occasionally all would fly almost vertically into the air for about a hundred feet, then plane steeply down.

YELLOW BUNTING (*Emberiza c. citrinella*).—Song in general did not begin before the third week of February, although one male was singing on January 28th. Two nests ready for eggs on April 21st had each one egg on the 24th.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—In one locality a male was seen and heard in song on May 8th ; the female may have been present then but was not noticed until the 12th. The nest with three eggs was found on the 19th, on the 24th there were eight ; these hatched on June 5th, incubation-period twelve days, and the eight young flew on the 18th, fledging-period thirteen days (*cf.* Vol. XIX., p. 281). The male continued in song until the young hatched, often singing to the brooding female, and gave as much song during the incubation-period as before it.

Another male was located on May 24th ; he was in full song and paid several visits to a certain knot-hole in an elm tree. On the 30th he was still singing vigorously, but no female was seen, and when the knot-hole was examined, and found empty, he came within a few feet of me, uttering his alarm-note. After I left the tree he twice visited the knot-hole and pursued from the tree a Great Tit. On June 6th the knot-hole was still empty, no female was seen, and the male was giving very little song, but still maintained a watch on the tree and drove away a Tree-Creeper. On the 17th a female was flushed from the knot-hole, which held a nest of three eggs, and by July 3rd there was one nestling about six days old, the other eggs being infertile.

A third male was noticed on June 4th, and by the sustained vigour of his song and the way he was investigating all knot-holes had evidently just arrived. He was observed for nearly three weeks, during the greater part of which period he frequented an oak tree and made periodic visits to a certain knot-hole, but no female came and he disappeared, his song having gradually diminished during his stay. The same fate befell a fourth male who was also unable to obtain a mate, although in possession of a breeding-territory including trees with empty knot-holes.

LESSER WHITETHROAT (*Sylvia c. curruca*).—Near Carlisle, on July 20th, a nest of two young was found. Both adults were seen, general coloration above dark grey, almost a bluish-grey, below white; no rufous-coloured wings or prominent white throat. Their alarm-note was a loud "tuc-tuc-tuc." The nest, slightly constructed, was about four feet from the ground in some brambles.

HEDGE-SPARROW (*Prunella m. occidentalis*).—Males do not usually begin singing before the last week of January or first week of February. This year one began on January 28th; throughout the autumn and early winter months no song is heard. Some pairs keep to the same territory throughout the year, whilst with others the sexes separate for the winter, especially with "hard weather" conditions. On October 12th three birds, by their behaviour two females and a male, were pursuing one another about the garden, but since then only the pair has been noticed. In another territory on November 20th a pair, presumably male and female, attacked and drove away a third bird.

WREN (*Troglodytes t. troglodytes*).—Wrens often remain in pairs, and frequent the same territory, throughout the year. The male's song, heard in every month, may help him to retain his mate and perhaps signifies his willingness to breed at any season.

On September 23rd, two Wrens, presumably male and female, were about the garden. The male pursued the female to a wall and then, with wings and tail half open and drooping, burst into vigorous song; when he had finished the female sang, a song as loud and vigorous as his; a similar incident was witnessed on November 7th. A pair was seen in a hedge on November 6th, the male attempted coition but the female refused; they fought, after which he burst into song, then followed her. A male was noticed on November 20th, whilst singing to a female, slowly to extend his wings and raise them to their highest, then lower them; this action was repeated several times.

TAWNY OWL (*Strix aluco sylvatica*).—A pair laid in a hollow tree; the eggs were laid on alternate days and incubation began with the first egg. The nestlings hatched on alternate days and if the eggs hatched in the order in which they were laid, then the incubation-period for each was twenty-eight days. The nestlings were brooded during the day until the eldest was fifteen days old. Only two nestlings were reared.

Egg No.	Laid.	Hatched.	Incubation Period.	Young left the nest.	Fledging Period.
1	March 21	April 18	Days. 28	May 20	Days. 32*
2	„ 23	„ 20	28	„ 22 (?)	32 (?)
3	„ 25	„ 22	28	} Disappeared by	red
4	„ 27	„ 24	28		May 3rd.

* *antea* Vol. XIX., p. 281.

The following notes deal with the development and food of the young. All mammals and birds were headless unless otherwise stated. April 18th, one nestling out, other eggs unchipped; one perfect short-tailed field-vole. 20th, two nestlings, other eggs unchipped; three long-tailed field-mice (two perfect), and three nestling Song-Thrushes (two perfect). The Song-Thrushes were only partly feathered and had obviously been taken from a nest. 22nd, three nestlings. 24th, four; remains of a Song-Thrush. 26th, two older nestlings have the quills of the flight-feathers and mantle appearing. May 3rd, only the two older nestlings left. Feathering on the head, nape, mantle, and wing-coverts, and the flight-feathers are breaking out of the quills. A brown rat, a long-tailed field-mouse, and a perfect shrew. 15th, a young Blackbird. 20th, one young Owl sitting on a branch of the nest-tree was in full juvenile plumage (legs in down), the other was still in the nest, a little down about the head and the tail-feathers only two-thirds out. Its fledging-period would be thirty-two to thirty-three days.

PEREGRINE FALCON (*Falco p. peregrinus*).—A female was flushed on April 19th from an empty ledge. She flew up and down the face of the cliff, making no outcry, now and again flying to a considerable height and hanging head to wind like a Kestrel. On a feeding-place near this ledge were many pellets and the remains of a Greenfinch, several Meadow-Pipits, a Redwing, and two Song-Thrushes. On May 10th the female was brooding one egg on this ledge and when disturbed flew about the cliff-face, calling frequently and fighting with a pair of Ravens which had a brood of four fledged young about fifty yards away in the same cliff. On the nesting-ledge were the remains of a Homing-Pigeon and a rabbit, and on a feeding-place a Redshank. The eyrie was found robbed by May 22nd.

MERLIN (*Falco c. aesalon*).—The Merlin still breeds in the Lake District. In June, 1924, a female was seen in a certain locality but the nest was not found. Several visits were paid to the locality this year and the young located. On May 2nd a fight was watched between the male and a Buzzard which had entered the valley, resulting in the latter being put to flight. The Merlin would swoop down on the Buzzard, the larger bird avoiding the rushes by a movement of its wings, but twice its small antagonist struck it, and most of the time the Buzzard was mewling. On June 17th the female was found brooding four one-day-old nestlings. Both adults disappeared out of sight, making no outcry, when disturbed, but on the other occasions when the nest was visited the female, and the male if present, was always very noisy. By the 24th there were only three young, and they were found on July 12th perched on a boulder some distance above the nest and flew off strongly when disturbed; this gives a fledging-period of twenty-five days (*cf.* Vol. XIX., p. 281). The nest was observed for several hours on July 1st and 5th, and it was found that the female kept guard and fed the young, the male hunting and plucking the prey and keeping guard whilst she was at the nest. From the prey found on the boulders the young were fed entirely on Meadow-Pipits and Wheatears. When the prey was plucked, sometimes the male took it to the female, sometimes he called and she came for it.

Another pair was located (not in the Lake District) but had been robbed. On various feeding-places were the remains of two young Redshanks, a Meadow-Pipit, a Song-Thrush, and a Stonechat.

COMMON BUZZARD (*Buteo b. buteo*).—On May 3rd a nest of three eggs was found in the top branches of an alder tree, the nest-rim gracefully decorated with green larch sprays, and within three hundred yards another pair had a similar clutch in a nest in a cliff-side. Both pairs were subsequently robbed, a fate which befell three more pairs.

A female was flushed from a clutch of four eggs on April 19th; none of the eggs were chipped on May 10th, but by the 22nd the four young were out, the two eldest approximately nine days old, the third seven days, the youngest five. If the first egg was laid on April 13th and incubation began with it, then the incubation-period was approximately twenty-eight to thirty days. On the nest-rim were the perfect bodies of two short-tailed field-voles, a shrew-mouse, and a young stoat. There were still four young on June 8th, but the youngest was considerably behind the others in

development. These had their flight- and tail-feathers well out. The young were in a corner of the ledge, out of the nest, which was decorated, for the first and only occasion, with silver-birch twigs. About the nest were the bones of a rabbit. When the nest was visited on the 21st one of the eldest birds flew from the ledge, fledging-period thirty-nine days; its mate was in full juvenile plumage and so was the third young except for a little down on the head, and these two would probably fly in two or three days, but the youngest bird (now thirty-five days old) had still its head and thighs in down. About the nesting-ledge were many pellets of vole-fur and the remains of a Meadow-Pipit.

A clutch of three eggs was found on April 24th, and on June 1st the female was flushed from the nest, which held one young bird, thirteen or fourteen days old, clad in coarse greyish-white down, the quills of the flight- and tail-feathers appearing. The nest-rim, decorated with mountain-ash twigs, held the wing of a domestic fowl and the breast-bones, legs and feet of three adult Red Grouse. By the 19th the young Buzzard had grown considerably, the flight-feathers were developed and the tail-feathers two-thirds out. The mantle was feathered and the head and breast beginning to feather, but the thighs were still in down. The nest-rim, decorated with silver-birch twigs, held the breast-bones, legs and feet of an adult Red Grouse. On the 26th the young bird was in full juvenile plumage, and if it left the nest the following day its fledging-period was thirty-nine to forty days. The nest-rim, profusely decorated with mountain-ash twigs, held the remains of an adult Red Grouse.

About a month later this nest was visited and the remains of another adult Red Grouse found. The locality was also visited in the late autumn, and under some trees where the adults roosted at night were found many pellets, consisting entirely of the fur and bones of field-mice.

A clutch of two eggs found on May 10th reposed in a very slight nest, just five or six small sticks with a few pieces of bracken for lining. Near it were the remains of a rabbit. The eggs were still unhatched on the 22nd, the nest containing a lot of down and a flight-feather from an adult. By June 8th there was one young bird, the other egg being infertile, and on the nest-rim the hind-quarters of a rabbit. This nest was never decorated.

MALLARD (*Anas p. platyrhynchos*).—A party of five drakes and three ducks was observed on December 12th. The drakes were going through their courtship, bobbing their

heads up and down, each time touching their breasts with their bills, whilst at times both ducks and drakes would plunge and splash about in the water, diving at times, and occasionally both sexes were noticed swimming about with necks outstretched on the water. On one occasion a duck was swimming about like this when a drake approached and copulation occurred, after which event both birds thoroughly washed themselves.

SLAVONIAN GREBE (*Podiceps auritus*).—One observed on a pond near Carlisle on November 25th. On several occasions it brought to the surface and ate a small fish.

WOOD-PIGEON (*Columba p. palumbus*).—In the parish of Dalston, a flock of seventy-four to eighty birds was seen on May 20th, and one of thirty-five to forty on June 18th (cf. Vol. XVIII., p. 195).

STOCK-DOVE (*Columba ænas*).—A clutch of two eggs hatched on July 24th and the two young flew on August 17th, fledging-period twenty-four days (cf. Vol. XIX., p. 281).

DUNLIN (*Calidris alpina*).—A pair of Dunlin was seen on one of the Lake Mountains on June 19th, and although from their behaviour they appeared to be breeding no eggs or young were found.

GOLDEN PLOVER (*Charadrius a. apricarius*).—These birds breed, but very sparingly, in at least three localities in the Lake District.

LITTLE STINT (*Calidris minuta*).—One picked up dead on Burgh Marsh, Solway Firth, on October 14th was still in juvenile plumage, except that some of the inner secondaries had been moulted.

MOOR-HEN (*Gallinula ch. chloropus*).—A young Moor-Hen, when flushed from some reeds by a stream, made for the water and swam underneath for a distance of twenty to twenty-five yards before rising to the surface to breathe, and progressed in this way until out of danger. In swimming under water it mainly used its feet and occasionally its wings.

NOTES

“ BRITISH BIRDS ” MARKING SCHEME.

“ RINGERS ” are requested to send in to the Editor, not later than October 31st, their schedules, together with a list showing the number of each species ringed.

NESTING OF GOLDEN PLOVER, HAWFINCH AND RED-BACKED SHRIKE IN BRECONSHIRE.

WITH reference to Commander Wilson's note (*antea*, p. 104), I could point to several hills in his district alone where Golden Plover (*Charadrius a. apricarius*) were breeding over twenty years ago, where doubtless they have bred for all time; but they were not numerous. As to Hawfinches (*Coccothraustes c. coccothraustes*), I think it would be found that in certain parts of Breconshire they breed annually, but only a few. I found three nests in 1903 near Builth Wells, four fresh eggs on June 8th, a nest half built on June 11th (this was deserted), and two nestlings about a day old and an addled egg on June 26th. Evidently this species is a late breeder in Breconshire (*cf.* Commander Wilson's date, June 19th, four incubated eggs), unless, indeed, its original efforts are destroyed by vermin. Red-backed Shrikes (*Lanius c. collurio*) were quite common in parts of Breconshire, *e.g.* round Builth Wells.

JOHN WALPOLE-BOND.

WITH reference to Commander Wilson's note (*antea*, p. 104), the Hawfinch has been a regular breeder in Breconshire for years. I have two clutches of erythristic eggs which I took myself. I did not see a nest this year but saw one, if not two pairs of birds. The Golden Plover breeds every year on the hills. The Red-backed Shrike used, as Cambridge Phillips says, to be quite common, but for some years, at any rate in my district, it has become much more scarce.

R. P. SANDEMAN.

ADDITIONAL NOTES FROM GLAMORGAN.

IN addition to the Field-Notes from Glamorgan (*antea*, p. 58) by Messrs. G. C. S. Ingram and H. M. Salmon, the following occurrences may be worth recording.

BLACK REDSTART (*Phœnicurus ochrurus gibraltariensis*).—One male seen on November 8th, 1925, near the Worm's Head, Gower. It flitted amongst the gorse, from one open

space to another, allowing me to get within two or three yards of it on several occasions and to observe it for a considerable time.

NUTHATCH (*Sitta europæa affinis*).—It was reported to me by Mr. T. W. Proger, F.Z.S., that a Nuthatch had nested in a certain wood in the Vale of Glamorgan during 1925; his informant showed him the nesting-hole during the winter, and it had the characteristic mud stopping. Though I visited the wood on several occasions I did not see or hear the birds until April 10th, 1926, when one was seen in the tree. On the 22nd one was seen coming out of the hole, and on the 30th, and again on May 6th, I attempted to photograph the birds feeding young. In *The Birds of Glamorgan* the Nuthatch is mentioned as "only occasionally observed in the county" having "probably bred some years ago," and the nest having been taken on the Breconshire border.

GOOSANDER (*Mergus m. merganser*).—One at Kenfig Pool, March 21st, 1926.

BLACK TERN (*Chlidonias n. niger*).—Two Black Terns were seen on Kenfig Pool on March 21st, 1926, their dark appearance, coupled with the fact that never once in over two hours observation did they plunge into the water, but hovered above, occasionally "nipping" something off the surface, made me certain of their identification. On two occasions they alighted on some water-lily leaves near the edge of the pool, where I was able to see that they had dark markings on the neck, and that their feet were apparently black or very dark brown.

CLEMENCE M. ACLAND.

RED-BACKED SHRIKE BREEDING IN CHESHIRE.

EARLY in August, 1926, my wife and I watched a female Red-backed Shrike (*Lanius c. collurio*) feeding a young one at Wilmslow, Cheshire, and at another time we saw the male bird at the same place. In Coward's *Fauna of Cheshire* (1910) the only other record for the district is in 1869. EDWIN COHEN.

LAYING DATES OF THE GRASSHOPPER-WARBLER IN GLAMORGAN.

WITH reference to the notes on the early breeding of the Grasshopper-Warbler (*Locustella n. naevia*) by the Rev. F. C. R. Jourdain and Mr. Stanley Lewis (*antea*, p. 106), it may be of interest for the sake of comparison, to give the earliest dates of some of the nests we have found.

The birds arrive at their breeding-ground on an average about April 21st, the earliest date we have noted being the

15th of that month. The following are the details of five early nests.

May 28th, 1910. C/4. The young left this nest on June 19th. Allowing an approximate period of say twenty-eight days for incubating and fledging, and four for the laying of the clutch, the first egg would have been laid on May 18th.

June 13th, 1912. Four young which left the nest on the 17th or 18th. Allowing thirty-two days for laying, incubating and fledging, the first egg would have been laid about May 17th.

May 21st, 1913. C/6. slightly incubated. Allowing six days for laying, and three for incubating, the first egg was laid on May 12th.

May 29th, 1915. C/4. The young left the nest on June 11th. Allowing thirty-two days for laying, incubating and fledging, the first egg was laid on May 10th. The eggs in this nest when found were on the point of hatching, so that the fledging-period was twelve or thirteen days at the most.

May 19th, 1920. C/6, slightly incubated. Allowing six days for laying and three for incubating, the first egg was laid on May 10th.

GEOFFREY C. S. INGRAM.

H. MORREY SALMON.

FLEDGING-PERIOD OF HOUSE-MARTIN.

A CLUTCH of three eggs of the House-Martin (*Delichon u. urbica*) hatched on August 29th, 1925. The three young were ringed on September 12th, but when the nest was examined on the 19th there were only two young, and these flew the next day, fledging-period twenty-two days.

A clutch of four eggs, hatched on July 9th, 1926, and the four young left the nest on August 1st, fledging-period twenty-three days.

R. H. BROWN

MARSH-HARRIER IN WESTMORLAND.

ON May 24th, 1926, I picked up an adult female Marsh-Harrier (*Circus æ. æruginosus*) on Rigmaden Moor, Kirkby Lonsdale. The bird had been shot at and had just died. It was in poor plumage, the ovaries enlarged, but no eggs had been laid this year. The crop contained rabbit flesh and Coot's eggs.

LAURENCE ARDERN.

AN UNRECORDED NIGHT-HERON IN SOMERSET.

THROUGH the kindness of Mr. E. G. Holt, of Burnham-on-Sea, my attention has lately been drawn to the existence of a hitherto unrecorded Somerset example of the Night-Heron

(*Nycticorax n. nycticorax*). This is in the possession of Mrs. Shingleton, of Panborough Inn, near Wedmore, where I have examined it. The owner was able to supply sound data. The bird was shot by a member of her family, Mr. Thomas Clarke, on Normoor, near Panborough. She was positive that it was killed some time before her marriage, which took place forty-seven years ago, and this would, in any case, preclude the possibility of its being the same as one mentioned by T. Compton in "A Mendip Valley" (and quoted by the Rev. F. L. Blathwayt—*Victoria County History, Somerset*, Vol. I.) as having been killed near Glastonbury in 1881, and "brought to Mr. Clothier." Subsequently, I succeeded in tracing this latter bird, which is still in existence. No clue seems to be given in Compton's book to the identity of "Mr. Clothier." In point of fact the reference is to the late Mr. J. W. C. Clothier, of Street, near Glastonbury, in the possession of whose son, Mr. A. T. Clothier, the bird now is. Mr. Clothier has kindly permitted me to examine it and has also shown me his father's copy of Selby, in which there appears under "Night-Heron" the marginal note "Shot at Street, Somerset, 1876." Compton's date is, therefore, apparently incorrect.

B. W. TUCKER.

WHIMBREL INLAND IN N. WALES.

THE Whimbrel (*Numenius phaeopus*) is not often observed inland in N. Wales, so it may be worth recording that while out on the hills at Llangwm, Denbighshire, on August 21st, 1926, five Whimbrel, uttering their characteristic oft-repeated call-note, passed overhead, coming from the Cerrig-y-druidion direction and disappeared over the hills towards Bala.

M. V. WENNER.

FLEDGING-PERIOD OF COMMON TERN.

A COMMON Tern (*Sterna h. hirundo*) ringed as a day-old nestling on June 21st, 1926, was caught again on July 20th, and was then in juvenile plumage and beginning to fly, fledging-period thirty days.

R. H. BROWN.

ERYTHRISTIC EGGS OF SKY-LARK.—In a note on this subject (*antea*, p. 109), three or four cases are mentioned in which red eggs of the Sky-Lark (*Alauda a. arvensis*) are recorded. Mr. W. J. Ashford now writes that he found a nest with four eggs of this type in June, 1926, in Lancashire. Three were on the point of hatching and one, which he took, was unfertile. Mr. J. M. Goodall has also two erythristic sets in his collec-

tion : c/3 from Yorkshire, and c/2 taken by Captain Staes, so that about seven cases of this aberrant coloration are now on record ; six from the British Isles and one from Denmark.

CONTINENTAL SONG-THRUSH IN BUTE.—The Rev. J. M. McWilliam states (*Scot. Nat.*, 1926, p. 60) that for several years he has noticed a difference in some of the Song-Thrushes frequenting Bute in winter. On December 3rd, 1925, he shot two of these birds and found they were of the typical form *Turdus philomelus philomelus*, an opinion confirmed by Surgeon Rear-Admiral Stenhouse on comparison with other specimens. Mr. McWilliam considers that these birds stay in Bute several months and leave in the early spring.

WHITE SWALLOW IN IRELAND.—Mr. W. H. Workman informs us that he saw a pure white Swallow (*Hirundo r. rustica*) on August 14th, 1926, near Ballycastle, co. Antrim ; it was flying about with ordinary coloured birds and appeared to be a young bird as the tail-feathers were short.

CUCKOO RETURNING TO SAME SUMMER QUARTERS FOR EIGHT SUCCESSIVE YEARS.—Major Van de Weyer informs us that the Cuckoo (*Cuculus c. canorus*) with the peculiar broken note reported in Vol. XVI., p. 107, Vol. XVIII, p. 30, and Vol. XIX., p. 30, returned to Hungerford Park, Berkshire, for the eighth successive year on April 19th, 1926.

SHORT-EARED OWL BREEDING IN WESTMORLAND.—Mr. Laurence Arden writes that a pair of *Asio f. flammeus* successfully reared a brood in Westmorland in 1926.

WHITE WILD GEESE.—Under this title, Mr. H. S. Gladstone contributes an interesting article to the *Scottish Naturalist* (1926, pp. 37-46), in which he shows that albinistic wild Geese of any species are extremely rare. He has, indeed, after much research, been able to trace only fourteen specimens, while a few others have been recorded as seen. A white Barnacle-Goose (*Branta leucopsis*) shot on the Dumfriesshire side of the Solway on January 3rd, 1925, and now in Mr. Gladstone's possession, is the only recorded albino of that species so far as the author knows. This remarkable bird is well figured, as is the cream-coloured Bean-Goose (*Anser fabalis*) shot on the Solway in 1917 (not 1916, as recorded in *Brit. Birds*, Vol. X., p. 276), and the cream-coloured Pink-footed Goose (*A. brachyrhynchus*), also shot on the Solway and referred to in the above-mentioned note. The date of this last, Mr. Gladstone now gives as October 12th,

1912, and the locality Rockliffe Marshes, Cumberland. Other White Geese obtained in the British Isles and enumerated by Mr. Gladstone are Grey Lag-Goose (*Anser anser*), shot on S. Uist between 1895 and 1905, and another shot but not retrieved on the Firth of Tay about 1890.

RED-BREASTED MERGANSER NESTING IN RENFREWSHIRE.—Mr. J. P. Ritchie records (*Scott. Nat.*, 1926, p. 61) that in the spring of 1925 he found a nest of *Mergus serrator* on an overhanging bank at a fresh-water loch in Renfrewshire. Ten eggs were laid and hatched. Although the bird is known to breed in Dumbarton this appears to be the first record of breeding in the neighbouring county.

EARLY ARRIVAL OF JACK SNIPE IN DEVONSHIRE.—Mr. P. B. Savile informs us that he shot a Jack Snipe (*Lymnocyptes gallinula*) on August 3rd, 1926, on Dartmoor.

EARLY ARRIVAL OF JACK SNIPE IN WIGTONSHIRE.—Mr. M. Portal writes that a Jack Snipe (*Lymnocyptes gallinula*) rose twice on August 6th, 1926, at Corsewall, and was identified by Mr. D. Currick Buchanan.



REVIEWS

A Natural History of the Ducks. By John C. Phillips. Vols. III. and IV., with many Plates. (London: Longmans). £10 10s. per vol.

MR. PHILLIPS is to be sincerely congratulated on bringing his great work on the Ducks to an end so promptly. The very full bibliography (extending to over a hundred pages in double column) printed at the end of Volume IV. demonstrates the magnitude and thoroughness of the author's research into the literature of his subject and this, especially in connection with distribution and habits, is a feature of the work, as indeed it should be in a monograph. Our only little regret is that Mr. Phillips has not given rather more detailed descriptions of plumages and more details regarding classification and nomenclature—for instance, the type-localities of names proposed are not cited. But as a whole there is no doubt that the author has given us a very excellent and most acceptable account of the Ducks of the world, and the more one examines the work the more one must realize the vastness of the subject and the immense labour and wide knowledge Mr. Phillips has brought to his task.

A secondary but very important feature of the work is in its illustrations. The great majority of them are the work of Major Allan Brooks, the well-known Canadian ornithologist and artist. Major Brooks has the rare advantage of being not only an excellent bird-artist, but also a very fine field-ornithologist of great experience. There is no doubt that in the drawing of birds Major Brooks is a master, and we think he excels even more in this than in his colouring, which is sometimes inclined to be too dull, though this is certainly better than an exaggerated brightness. But even if we do not think all his coloured plates very pleasing there are very many which are most admirable in this respect and they all show the birds well, while the uncoloured plates (chiefly of display attitudes) are most excellent. H.F.W.

THE MARSHAM PHENOLOGICAL RECORD.

IN Vol. LII., No. 217, of the *Quarterly Journal of the Royal Meteorological Soc.* (Jan. 1926), there appears a very able paper by Mr. Ivan D. Margary upon the "Marsham Phenological Record."

This Marsham Record, probably unique as a record of private observation, was begun by Robert Marsham, F.R.S., in 1736, and has been continued by his son, grandson, great-grandson, and great-great-grandson (Major H. S. Marsham) up to the present time, and except for two gaps, from the years 1811–1835 inclusive, and from 1841–1844, it covers a period of 190 years, the observations from 1736 to 1858 being made at the estate of Stratton Strawless, about 7 miles north of Norwich, and from 1858 onwards at Rippon Hall, 1½ miles to the north of this.

Robert Marsham, F.R.S., a correspondent of Gilbert White, and recorder, in a letter to him, of the Norfolk specimen of the Wall-Creeper (*Tichodroma muraria*), read his observations for the first fifty-two years (1736–1788) before the Royal Society on April 2nd, 1789, and these were published in the *Philosophical Transactions* (79, Part 2, 1789). They were later discussed by Mr. T. Southwell in two papers

contributed by him to the *Norw. and Norwich Nat. Soc. Transactions* (1874-75, p. 31, and 1901, p. 246), but since then no work appears to have been done upon them until the appearance of Mr. Margary's paper.

The record deals with twenty-seven natural phenomena, seventeen of which refer to the flowering of plants and the leafing of trees, and eight to the movements of birds, these latter being arranged under the following headings:—Swallow, Cuckoo, Nightingale, "Churn Owl Calls," "Thrush sings," "Ring Doves coo," "Rooks build," and "Young Rooks."

From the entries under some of these headings Mr. Margary has worked out a very interesting series of charts and curves, and for the purpose of continuity the gaps for the years 1811-35, and 1841-44, have been bridged from entries in two contemporary records dealing with the same phenomena, namely those of Henry Cox, who kept a record at Farningham, Kent, and later at Limpsfield, Surrey, and that of Orlando Whistlecraft at Thwaite, Suffolk.

As regards the bird observations, with which the present writer is alone concerned, too many small gaps occur in the Nightingale and Nightjar records to make the charting of satisfactory curves possible, though one may mention in passing that the earliest and latest recorded dates for the former are April 2nd and May 23rd (average April 26th), and for the latter April 27th and July 9th (average May 24th).

The entries for the spring arrival of the Cuckoo and Swallow, however, are so complete that in the 140 effective years (omitting 1811-35 and 1841-44) of the Marsham record, there is only one blank for the Cuckoo and six for the Swallow, and the curves which Mr. Margary has worked out for these two birds over the whole period of 190 years are, I think, of considerable interest to ornithologists.

The earliest recorded date for the arrival of the Cuckoo is April 12th, and the latest May 7th (average April 25th), and for the Swallow—earliest April 3rd, and latest May 12th (average April 19th). This gives a range of variation of thirteen days for the Cuckoo, and forty-one days for the Swallow, and a comparison of the charted curves of these two birds shows in a very striking manner a much greater regularity of arrival in the former than the latter. Again, whereas the yearly fluctuation in the arrival of the Cuckoo corresponds to some extent with the curve of the April temperature (very possibly, as Mr. Margary points out, the temperature of a shorter period, say the week of arrival, would show an even closer agreement) that of the Swallow shows no relationship to April temperature at all. On the other hand, the Swallow curve shows a curious periodic fluctuation of alternate earliness and lateness, the average length of the periods being 7.6 years.

Perhaps the most interesting fact, however, is elicited by a comparison of the first and last periods of thirty-five years in the record, *viz.* 1751-1785 and 1891-1925. The average date for the arrival of the Cuckoo in the first period is April 25th and in the last April 23rd—a variation of two days. In the case of the Swallow the average date for the first period is April 15th, and for the last April 23rd—a variation of eight days. This retardation in the arrival of the Swallow would appear, from a study of the decade averages, to have been a gradually increasing one over the whole period of the record, and, as Mr. Margary suggests, may possibly indicate some definite climatic change at its winter quarters.

B.B.R.



LETTERS



DISAPPEARANCE AFTER NESTING OF THE PIED FLYCATCHER.

To the Editors of BRITISH BIRDS.

SIRS,—The letter from Mr. Astley (*antea*, p. 112) interests me as I live in a Pied Flycatcher district and have noticed the sudden disappearance of both young and old birds as soon as the former have left the nest. I usually have three or four pairs in my nesting-boxes and despite careful observation am still puzzled.

A possible explanation is that the whole family retires to the wooded area that always obtains near the nesting-site and by virtue of silence and shyness escape notice in the dim light. The only birds I have seen, except at the nesting-site, have been in the woods, but I have not seen enough there to satisfy myself that it explains the disappearance satisfactorily.

Another suggestion is that as soon as the young leave the nest movement towards the "migration-route" begins. If that is so one would expect to hear of their appearance each year at a fixed time at certain places. But we do not.

It is an interesting question and considering how conspicuous the bird is it is extraordinary that the question should arise.

MOSSDALE, ULLSWATER.

H. J. MOON.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Astley's letter on this subject (*antea*, p. 112), on July 10th, 1912, I watched a party of Pied Flycatchers for some time on trees by a stream in north Northumberland. They were known to breed at that time in Chillingham Park, which was distant about half a mile from where I saw the birds. A. V. STONE.

THE EGG-DEVOURING HABIT OF THE CUCKOO.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the note under this heading in the September issue (*antea*, p. 102), the following may perhaps be worth publication as confirmatory of Mr. G. R. Humphreys' observations.

On May 29th, 1926, while waiting for a train at Appledore Station (Kent), I watched a Cuckoo (*Cuculus canorus*) sit for about fifteen minutes on a signal post on the railway. Presently, it floated down into a reed-bed beside the line, where it remained between one and two minutes. It then flew out on to a post and I could see with my binoculars that it carried an egg in its mouth. It threw back its head and gulped the egg down whole, after doing which it flew away. I was unable to go to the nest under the circumstances, but I have no doubt it had just laid an egg in the nest from which it extracted the one I saw swallowed. The owner of this egg (probably a Reed-Warbler) did not appear at all.

R. M. GARNETT.

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NOTES ON ALBERTA WADERS INCLUDED IN THE BRITISH LIST.

BY

WILLIAM ROWAN M.SC. F.Z.S., M.B.O.U.

PART IV.

SANDPIPERS.

(Plates 5 and 6.)

Calidris minutilla, AMERICAN STINT (A.O.U. Check-List,
Least Sandpiper).

C. maculata, AMERICAN PECTORAL SANDPIPER.

C. bairdii, BAIRD'S SANDPIPER.

C. fuscicollis, BONAPARTE'S SANDPIPER (A.O.U. Check-List,
White-rumped Sandpiper).

(*Calidris*, A.O.U. Check-List, *Pisobia*).

Tryngites subruficollis, BUFF-BREASTED SANDPIPER.

Ereunetes pusillus, SEMI-PALMATED SANDPIPER.

SINCE about the above six species there is "so much of a muchness" that confusion generally reigns in trying to tell one from the other, it would seem well to consider them together.

Theoretically, both the Buff-breasted and Bonaparte's Sandpipers should be easily distinguishable in the field, the former on account of its buff colour, the latter by virtue of its white rump. Occasions when this cannot be seen must be rare and I should imagine there is only one bird that can well be confounded with the Bonaparte—the Curlew-Sandpiper in winter plumage. The ordinary note is characteristic, but that merely enables one to detect the presence of the bird in a mixed flock. It does not help one to recognize it as an individual in a crowd. The note, described by Nichols in the *Practical Handbook* and in his "Limicoline Voices" (*Auk*, 1920) as "jeet," sounds to me more like

"tzeet,"

but whichever is the more correct, there is no other wader that I am familiar with that produces anything like it. Harrold very aptly compares it with an exaggerated bat's squeak. This species has another note that I at first took to be diagnostic, a soft and very musical bubbling uttered in flight, not unlike the soft whinnying of feeding Sanderlings;



SANDPIPERS.

Foreground: left to right (1) Male; (2) Female Pectoral; (3) Semi-palmated Sandpiper; (4) Baird's; (5) American Stint. All adults, May. Flying: left to right; (1) Bonaparte's; (2) Applicable to Pectoral, Baird's, Semi-palmated and American Stint; (3) Buff-breasted Sandpiper; (4) Semi-palmated Plover.

Copyright by W. Rowan.



but in 1924 I heard several birds of some other species (probably Semi-palmated Sandpipers) produce a call so similar that they seem to me to be inseparable. The sounds came from a mixed flock of some 200 Baird's, Semi-palmated and



Fig. II. BONAPARTE'S SANDPIPER (*Calidris fuscicollis*).

Adult, May. Life size.

(Copyright by W. Rowan.)

Least Sandpipers, as it passed me in full flight and close formation. But there were no Bonaparte's in it.

I have no notes on the calls of the Pectoral, Baird's, Semi-palmated or Least Sandpipers worth reproducing.

The last is always recognizable and sounds rather like

~
“greet,”

but the first three have call-notes so alike that it would be difficult to describe them separately. They are all of the same order as the Dunlin's with some slight but characteristic variation. The spring note of the Buff-breast on the other hand is the most unusual and diagnostic wader note that I know. The only thing it reminds me of is the song of the Short-billed Marsh Wren (*Cistothorus stellaris*), which produces a very excellent imitation of two stones being chipped together. The note of the Buff-breast has the same quality about it, but instead of being loud and clear, it is quiet and very short and might be described as

~
“tik.”

This species, however, is rather silent. I call this the spring note, but perhaps it should more correctly be termed the adult note, for we have not a single good record of an adult in the autumn, wherefore I am only familiar with young at this season. Like some other waders (*e.g.* Willet), birds of the year have a very different call or calls from spring adults. In the case of the Buff-breast the note of the young is so like the Pectoral's—Harrold considers it shorter and less harsh—that, although distinguishable in the field, it can hardly be described adequately by itself.

As to distinguishing the birds in life. This is quite easy after one has seen many thousands of them, but it is remarkably hard to explain in so many words how it is done. It seems to me that if we did not have Baird's Sandpiper to confuse us, other members of this group would be very much easier to recognize. But Baird's Sandpiper forms an intermediate link between the female Pectoral and the Semi-palmated and has a back almost identical with the Buff-breast's and is but little inferior in size, in fact it may be as large as a female Buff-breast. And about the Baird, unfortunately, there is nothing characteristic. To my mind this bird and the Semi-palmated are the most easily confounded, though I do not think everybody would agree with me. The former looks smaller in life than it actually is and the latter larger. As they impress themselves on me the American Stint or Least Sandpiper is sufficiently small to be easily spotted by size alone. It is appreciably smaller than the

Little Stint, whereas the Semi-palmated is about the same size. There is not much difference in size of made-up skins, but in life there is a great deal. The slender bill of the American Stint is a useful character for it is more readily and

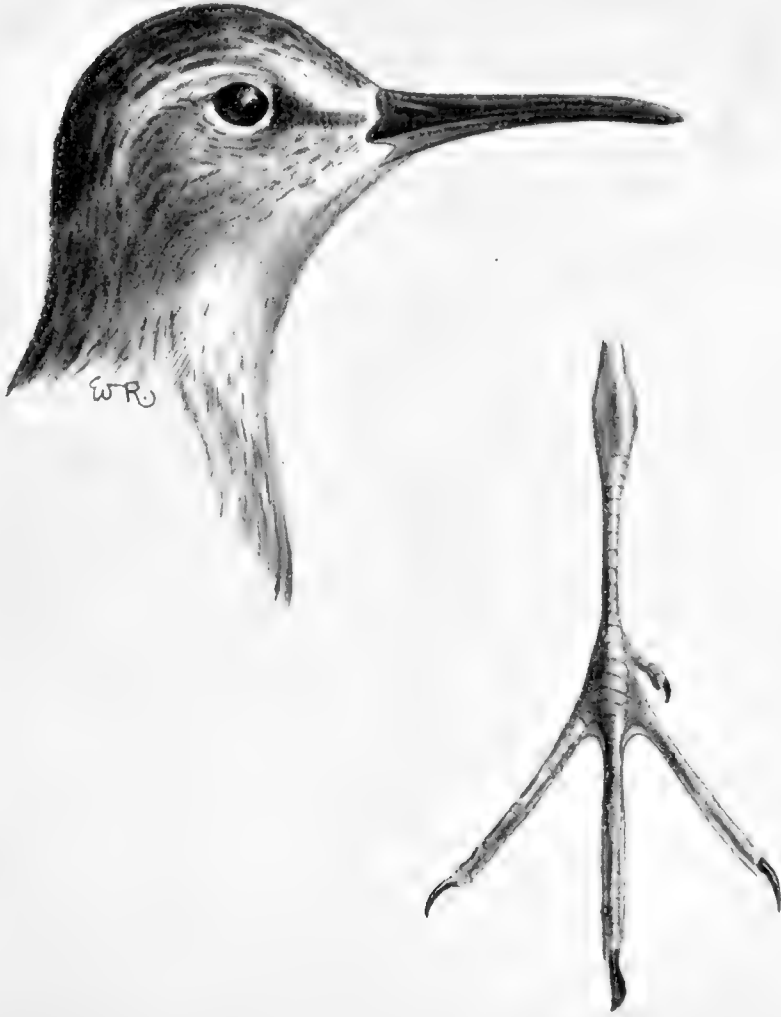
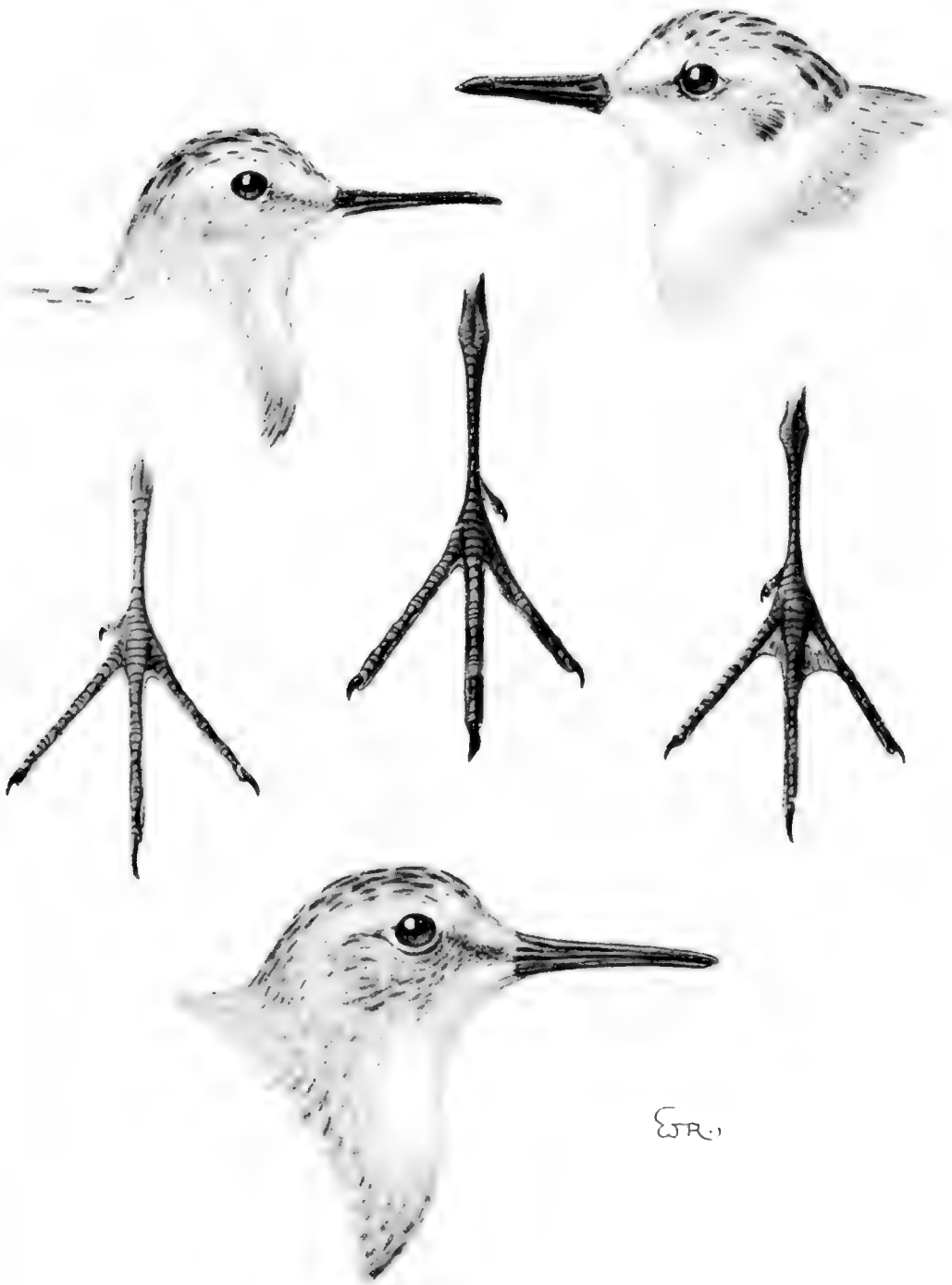


Fig. 12. AMERICAN PECTORAL SANDPIPER (*Calidris maculata*).
Adult male, May. Life size.
(Copyright by W. Rowan.)

much more frequently on view than are the legs which are pale instead of dark as in the Semi-palmated. The American Stint, moreover, has a distinctive streaky pattern on the back, very similar to the Pectoral's and Little Stint's.

In skins there is a great difference in size between Baird's and the Semi-palmated Sandpipers. In life it is not so apparent. Perhaps the reason is that Baird's is *about* the size of many other waders and one does not lay the stress on size that one does with the American Stint which comes at the end of the scale. Yet the Semi-palmated, apart from its heavy and rather stumpy bill, has a characteristic feature which stands out quite clearly to my eyes. I have tried to indicate it in the sketch of this group of birds (Plate 6). It appears to have an almost white half-collar running from the bill backwards to behind the ear-coverts and this can be seen in all plumages. What accounts for this appearance it is difficult to say, but neither the American Stint nor Baird's Sandpiper exhibit it. Brooks (*Condor*, 1924) has pointed out the similarity between the Buff-breast and Baird's, and also the differences. Personally, except that their backs *are* very alike, I cannot see that they should be as easily confused as Brooks suggests. I do not agree that their carriage is similar. Baird's Sandpiper is one of those satisfied little individuals, like the Sanderling and Semi-palmated, that barely bothers to get out of the road of persons on foot, except under certain weather conditions. It always presents a cosy, dumpy appearance, head tucked well in (Plate 6). The Buff-breasted Sandpiper, on the other hand, is extraordinarily like a Plover in carriage and poise, and, though excessively tame, always sticks its head in the air when approached.* In this respect it closely resembles the Pectoral, which Brooks justly maintains should never be confounded either with Baird's or the Buff-breasted. However, I should point out that Brooks's observations have been mostly made on single Buff-breasts, for it is a very rare Sandpiper indeed, and under such circumstances it may behave differently from those in which I have mainly noted it, in flocks of scores, sometimes hundreds. Nevertheless, in the fall we get the species usually one at a time, but its general alertness has struck me even then. While the pattern on the backs of these two birds is very similar, there are some differences worth pointing out. The Buff-breasted has a much paler crown than Baird's and the rump lacks the clear-cut white sides and almost black centre of Baird's. Legs are seldom of practical value in the field amongst waders, but, when available for inspection, the

* Wetmore ("Observations on the Birds of Argentina, Paraguay, Uruguay, and Chile," Washington, 1926, p. 158) says of the Buff-breasted Sandpiper, "On the ground in profile, they show a *long neck* and long legs, while the short bill is suggestive of that of a pigeon."



Left: American Stint. Juvenile, August. Centre: Baird's Sandpiper, Juvenile, August. Right: Semi-palmated Sandpiper, Juvenile, August. All nat. sizes.

Copyright by W. Rowan.



yellow of those of the Buff-breasted and the black of Baird's are useful marks. The white throat and pale eye-stripe of Baird's are moreover entirely wanting in the Buff-breasted. The white bases of the primaries and secondaries in the Buff-breast produce, as Harrold first pointed out to me, a most characteristic wing-pattern when the bird is in flight and seen under favourable conditions. It is not a wing-bar, but a sort of island of white surrounded by dark. This added to the rump appearance makes the Buff-breasted really unmistakable.

As to the Pectoral Sandpiper, it has such a pronouncedly striped pattern on the back—rather reminiscent of a Snipe—especially in juvenile plumage, that it can readily be told from anything else. If seen from the side or front, the very abrupt line where the dark breast ceases is diagnostic in all plumages. A well-marked Baird may look very similar in this respect however. But its washed-out colouring and conspicuous checkering on the back in place of stripes give the show away without fail. The Semi-palmated has a somewhat similar arrangement but does not look so faded in its pale parts and has the checks somewhat less distinct (Plate 6).

As to the migration dates of these waders, the Buff-breasted is to be dealt with separately; Bonaparte's is probably regular in the spring, but scarce, and does not appear till the last week of May and lingers into June. We have not a single fall record of it. Baird's Sandpiper is extremely abundant in the middle of May. It has usually gone by the 24th. In the autumn it reaches its maximum abundance during early September, but we have records of it for every month from April to November inclusive. The American Stint is never very abundant, the Semi-palmated exceedingly so. Their main migrations occur later both in the spring and autumn than Baird's. Pectorals have the same general dates. On account of the very great difference in size of the sexes of this species they can easily be distinguished in life. It is therefore worth noting that the males arrive as much as two weeks ahead of the females in the spring. Whether they leave any earlier is a difficult point to decide since their dates overlap, but some males are here as late as the last females and the later flocks are all mixed. In the autumn, adults are here in the beginning of August; young do not arrive till after the middle of the month. Our latest date is October 21st. This species is irregular in its dates, however, and erratic in numbers, varying from a few to thousands.

With the exception of the Buff-breasted Sandpiper, all the

birds of this group are birds of the muds and shore-line. But all, except Bonaparte's, have been noted feeding high and dry on rough pasture, the Pectorals more often than the others. The last, the only ones of the group besides the Buff-breasted constantly to carry the neck extended, frequently remind one of Snipe in their manner of getting up when one approaches too closely. They always call on rising and incline to zig-zag as they leave. The flocks scatter more than the other species (the American Stint is inclined to do the same thing) and birds are apt to get up singly.



Fig. 13. SEMI-PALMATED SANDPIPERS AND YELLOWSHANKS.
(Photographed by W. Rowan.)

From May 18th onwards in 1925 we saw Semi-palmated Sandpipers displaying. Some of the performers were collected. All were males. Nelson (*Natural History Collections made in Alaska*) has given an account of the love display of *Ereunetes mauri*, but I can find no record of that of *E. pusillus* having been previously witnessed. It is, however, exactly like the display described by Nelson for *mauri*, but we saw no song-flight as described by him. As we saw the display, it was no doubt incomplete. It consisted of (a) males in pairs fighting, not seriously, but merely running at each other with wings raised and (b) males running along with their wings drooping, tail raised and partially fanned, and whinnying. The whinny sounded very like the Sanderling's. The birds were always so thick when seen displaying that it was impossible to tell if the display was directed at or towards any other bird or not. A number would mostly be at it simultaneously.

We frequently get very violent gales of short duration in this part of the Province, particularly as a prelude to a thunderstorm. During such gales collecting becomes very difficult on account of the behaviour of the birds. They get so restless that it is quite impossible to approach them. They are not more nervous or wilder than usual but excessively restless, for if one stands still on a given spot, flock after flock will come by at close range or feed for a minute within a few feet of one, but they never stay still and it is impossible to inspect them for rarities. If one spots one in flight, one dare not shoot for fear of killing fifty or sixty others with the same shot. Collecting can thus become very tantalizing. When feeding, the birds—all the small waders behave similarly—fly up the coast into the wind, spread out along a favoured stretch of drift and foam, drop down tentatively and feed for a minute or two, and then suddenly go off again, still into the wind, to repeat the manoeuvre again further up.

On May 23rd, 1926, in a howling gale with the thermometer a couple of degrees above freezing, at the very height of the migration, we had the rare treat of seeing flocks of shore birds, some of which numbered thousands of individuals and included at least twenty-one certainly identified species (others were no doubt missed) in incessant motion all around us. The air was literally full of waders. Until one has witnessed such a scene one cannot appreciate its impressiveness.

The following description of a downy Semi-palmated Sandpiper is taken from a skin collected in Alaska (Bering Sea, Hooper Bay) and kindly lent me by Mr. H. B. Conover of Chicago. (For illustration see Part. VI.)

Fore-head white with blackish line bisecting hinder portion; crown mottled black and tawny and dotted with irregular tufts of white; nape black tufted with white; short black-brown line from lores nearly to eye bifurcating posteriorly, and another from base of mandibles (this is also present in a skin of downy *Calidris maculata* from the same source: it is not mentioned in the description in the *Practical Handbook* and is probably a variable feature in both species); remaining upper-parts mottled black and tawny with irregular tufts of white tending to be arranged in transverse rows (?) on the back; chin white; throat and cheeks suffused buffish; remaining under-parts white.

“Bill horn; legs flesh-grey; iris brown; June 28th, 1924, about forty-eight hours old.”

BIRDS MARKED ABROAD AND RECOVERED IN GREAT BRITAIN.

THE following have been reported, or have come to our notice, since the last list was published in these pages under this heading.

HOODED CROW (*Corvus c. cornix*).—P. Skovgaard, Viborg, Denmark, K.4,799, ringed as a young bird near Viborg, Denmark, on May 28th, 1925. Reported on Escrick Park Estate, East Riding of Yorks, on January 2nd, 1926, by Major W. F. Baines. Published in *Shooting Times*, March 27th, 1926.

STARLING (*Sturnus v. vulgaris*).—Museum, Leiden, 43,154, ringed as a nestling, at Wassenaar, Province Zuid Holland, on June 9th, 1925. Reported at Keycol Hill, Newington, Kent, on December 1st, 1925, by Mr. Phipps, per Mr. G. J. Scholey. Published in the *Chatham News*.

Vogelwarte Rossitten, F.36,716, ringed at Rossitten, Germany, on July 28th, 1924. Reported at West Derby, Liverpool, in December 1925, by Sir Lionel Fletcher, per Mr. H. S. Gladstone. Zool. Stat. Helgoland, 58,570, ringed at Heligoland on March 30th, 1925. Reported at East Boldon, co. Durham, on December 31st, 1925, by Mr. A. S. Black.

Stockholm, 7,955, ringed as a young bird at Stromsberg, Jönköping, Sweden, on June 11th, 1924. Reported at Cardiff, Glamorgan, S. Wales, on November 29th, 1925. (See *Fauna och Flora*, 1926.)

LAPWING (*Vanellus vanellus*).—Vogelwarte, Rossitten, E.25,050, ringed at Trantlack, near Friedland, East Prussia, on June 3rd, 1925. Reported at Badlesmere, near Faversham, Kent, by the Rev. C. Morgan-Kirby, on November 26th, 1925. Published in *The Field*, December 3rd, 1925, p. 949.

CURLEW (*Numenius arquata*).—Helsingfors Mus. C.154, ringed at Osterbotten, Finland, on June 15th, 1916. Reported in England on September 9th, 1916. (See *Ornis Fennica*, 1925, p. 39.) Name of bird not given.

TERN (*Sterna* ? species).—Helsingfors Mus., ringed in Finland in summer of 1925. Reported on River Medway, Kent, on October 8th, 1925. (See *Ornis Fennica*, 1926, p. 36.) Ring number and species uncertain.

BLACK-HEADED GULL (*Larus v. ridibundus*).—Vogelwarte, Rossitten, 38,989, ringed at Guhlan, near Driebtz, Posen, Prussia, on June 3rd, 1925. Reported at Gorleston, Norfolk, on November 18th, 1925, by Dr. B. B. Riviere.

Vogelwarte, Rossitten, 36,129, ringed on Island of Riems, Pomerania, on June 28th, 1925. Reported near Gt. Yarmouth, Norfolk, in December 1925, by Mr. T. G. Atkinson, per Ministry of Agriculture and Fisheries. Published in the *Daily Mail*.

Orn. Tartu, 68, ringed on Islet of Tulpe, near Arensburg, Island of Oesel, Esthonia, on June 25th, 1925. Reported at Lowestoft, Suffolk, on December 21st, 1925, by Mr. W. Dearn, per Dr. C. B. Ticehurst.

Stockholm, A.194, ringed as a young bird at Österhullen, Sweden, on June 19th, 1925. Reported at Walthamstow, Essex. (See *Fauna och Flora*, 1926, p. 126.) Date not given.

COMMON GULL (*Larus c. canus*).—Vogelwarte, Rossitten, E.36,534, ringed at Grasswarder, near Heiligenhafen, on July 20th, 1925. Reported at Uphill Mill, near Folkestone, on December 14th, 1925, by Mr. H. Kettle, per Ministry of Agriculture and Fisheries.

NOTES

ADDITIONAL NOTES FROM GLAMORGANSHIRE.

JAY (*Garrulus glandarius*).—The observation in "Field-Notes from Glamorganshire (II.)" (Vol. XVIII., p. 274) on the migration of a large flock, was confirmed in every particular of time, place, altitude and direction. This was on October 7th, 1923. On several later dates up to October 23rd, 1923, parties and stragglers (up to twenty in number at times) were also similarly observed between Llanedarne and Llanishen.

SWIFT (*Apus a. apus*).—Whilst crossing Rumney Common about 7 p.m. on September 23rd, 1925, a solitary bird was seen hawking above the ponds there.

LITTLE OWL (*Athenè n. vidalii*).—At 6 a.m. on June 4th, 1922, in the village of St. Nicholas, an adult was disturbed in the act of raiding a Starling's nest-hole between the guttering and slates of a cottage. The Starling was perched on the adjacent telegraph wires, loudly voicing its distress.

The spread of this Owl has been very rapid in S. Wales. On the Monmouthshire border it is the most abundant Owl. It appears to have reached Pembrokeshire, for on May 29th, 1926, an adult was seen at Martinshaven, Wooltack Point, the extreme south-westerly point of that county.

BEWICK'S SWAN (*Cygnus b. bewickii*).—Four adults seen on November 8th and 9th, 1925 (*cf. antea*, p. 61), at Kenfig Pool.

SHELD-DUCK (*Tadorna tadorna*).—On May 4th, 1924, seven adults of mixed sexes were seen walking about on a meadow slope near the Rhymney river, at a point where the latter is four miles (as the crow flies) from the Severn estuary. Upon being flushed, they flew in circles overhead, and betrayed their sexes by their voices. During that month, more were seen at intervals flying about the valley. From April 26th, 1925, throughout the following May, small parties of from two to eleven in number frequented the fields about Cefn Mably and on the Monmouthshire side of the river. They seemed especially partial to fields and hedges riddled with rabbit-holes. On one occasion two pairs were flushed from a warren in Cefn Mably Park. This year (1926) they again appeared in smaller numbers in the same district for the same period. Enquiry elicited the fact that they are well-known locally as "Bar-Ducks," and an observant farmer showed me a nesting-site far down in the rotten base of an oak tree. He

had found it by seeing some down at the entrance and by means of a stick had discovered the sitting duck on her nest. There is good cause to believe this statement, although the writer was too late to verify it. The farmer knew of two other sites, in each case in the hollow base of a tree. All three sites were in dry sloping meadow, bordered by woodland and a half a mile from the river on the Monmouth side. Of course, in such a fox-ridden district survival of the ducklings, if hatched, would be almost impossible.

TUFTED DUCK (*Nyroca fuligula*).—On May 7th, 1922, on St. y-nyll Ponds, an adult female. As a rule, the majority have departed by early April. RONALD M. LOCKLEY.

MAGPIE AND KESTREL NESTING IN SAME TREE.

ON April 9th, 1926, a friend found near Seaford, Sussex, a Magpie's (*Pica p. pica*) nest (containing one egg) in a May tree, in which there was also an old nest of a Carrion-Crow (*Corvus c. corone*); the two nests were about seven feet apart, the Crow's being a foot or two higher. A week later the Magpie had six eggs. On May 8th, the Magpies had hatched and there were four fresh eggs of a Kestrel (*Falco t. tinnunculus*) in the Crow's nest. On the 23rd, when I went to ring the Magpies, the Crow's nest contained one stained Kestrel's egg, and there were four fresh-looking Kestrel's eggs in the other nest. J. F. THOMAS.

ERYTHRISTIC EGGS OF SKY-LARK, BULLFINCH AND JAY.

WITH reference to the note on "Erythristic eggs of the Sky-Lark" (*antea*, p. 109), I recently had sent to me a clutch of three eggs of Sky-Lark (*Alauda a. arvensis*) similar in colour to those described for Fair Island. They were taken by my friend, Mr. F. Burrow, on Walney Island, Barrow-in-Furness, on May 18th, 1923. Later, in the same season, he found another similarly coloured clutch of four highly incubated eggs.

It might be of interest to record two other erythristic clutches of eggs in my collection, both from the collection of Mr. W. Chas. Cattell of Kettering: a clutch of four Bullfinch (*Pyrrhula p. nesa*) taken at Weekley Hall Wood, Northants, in June, 1902; and a clutch of five Jay (*Garrulus g. rufitergum*) taken by Mr. Cattell at Loddington, Northants, in May, 1907.

FRED. TAYLOR.

[The Bullfinch's eggs have already been recorded in *British Birds*, Vol. VII., p. 248.—F.C.R.J.]

THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

IN the following cases from West Sussex the period of incubation has been calculated from the day on which the last egg was laid until the day or days of hatching.

The fledging-period from the day or days of hatching until the day or days of departure from the nest.

Species	Incubation- period in days	Fledging- period in days	Period of year of observation
Linnet (<i>Carduelis c. cannabina</i>)	12	11-12	July-August
Linnet (<i>Carduelis c. cannabina</i>)	11-12	13-14	July-August
Yellow Bunting (<i>Emberiza c. citrinella</i>)	12	12	June-July
Cirl Bunting (<i>Emberiza cirrus</i>)	—	10-11	July-August
Sedge-Warbler (<i>Acrocephalus schænobaenus</i>)	—	11	June
Sedge-Warbler (<i>Acrocephalus schænobaenus</i>)	12-13	—	July-August
Whitethroat (<i>Sylvia c. communis</i>)	11-12	10-11	May-June
Wren (<i>Troglodytes t. troglodytes</i>)	16	16	June-July
Moorhen (<i>Gallinula c. chloropus</i>)	20-21	—	July-August

RAYMOND CARLYON-BRITTON.

BRAMBLING IN MIDDLESEX IN JUNE.

ON June 28th, 1926, I heard a strange bird-note on Hampstead Heath and on getting a view of the bird through my binoculars saw it was a Brambling (*Fringilla montifringilla*). I saw and heard the bird several times again and got good views of it, once within a few yards, when I noticed that the black crown and mantle were flecked with buff. I found the bird again on June 30th and July 9th.

R. W. PETHEN.

[Occurrences of the Brambling in summer in the south are occasionally reported and one was noted in Middlesex on July 7th, 1923 (see Vol. XVII., p. 83). As remarked in this case, probably such birds have failed to migrate owing to some disability.—EDS.]

WILLOW-TIT IN YORKSHIRE.

ON June 28th, 1926, I picked up in my garden at Scarborough a small bird which I thought was a Willow-Tit (*Parus atricapillus kleinschmidti*), an opinion which has since been confirmed by Mr. H. F. Witherby, to whom I submitted the specimen. It had apparently just died, and proved on dissection to have succumbed to an attack of apoplexy, an uncommon cause of death amongst wild birds in my experience, although the most frequent one in caged specimens.

I have suspected the presence of the Willow-Tit in this district for several years, as I have sometimes found very neatly excavated nesting-holes which probably belonged to this species, but this is the first specimen of the bird I have seen.

W. J. CLARKE.

EARLY BREEDING OF RED-BACKED SHRIKE.

ON visiting a known site of Red-backed Shrikes (*Lanius c. collurio*) in Surrey on May 30th, 1926, I was surprised to find a nest containing five young, which I judged to be fully four days old. Allowing fifteen days for incubation—they sometimes take sixteen days—this means that the nest contained a full clutch of eggs not later than May 11th.

Over a period of many years I have not previously found young before June, and generally it has been well into that month.

Is May 11th for a full clutch very remarkable?

D. W. MUSSELWHITE.

[The earliest dates of which I have notes are c/2 on May 18th, 1911 (Surrey); c/1 on 21st (Essex); c/4 on 23rd (Radnor); c/3 on 24th (Salop), etc. The date given above is ten days earlier than any of these.—F.C.R.J.]

EVIDENCE FOR DOUBLE-BROOD IN GRASSHOPPER-WARBLER.

DURING the season of 1926, I have personally examined the following nests of Grasshopper-Warbler (*Locustella n. naevia*) in the county of Somerset.

- | | | |
|---------------------|-------|---|
| (1) June 11th, 1926 | c/6 | Fresh. |
| (2) July 14th | „ c/5 | Slightly incubated. |
| (3) July 23rd | „ c/5 | Fresh. |
| (4) July 30th | „ c/3 | Several days incubated. |
| (5) July 17th | „ | A nest with two eggs was washed out by the great storm on the night of the 17th-18th. |

A sixth nest, found by a man in whom I have thorough confidence, contained one egg on July 27th and three on the 29th, but he was unable to find it again subsequently. These dates, taken in conjunction with those of Messrs. Walpole-Bond, Smythe and Lewis, for the same season, point to the species being regularly double-brooded. LEWIS R. W. LOYD.

[See Additions and Corrections to *Practical Handbook*, p. 894, "in south coast countries . . . regularly double-brooded." —EDS.]

EARLY BREEDING OF GRASSHOPPER-WARBLER.

WITH reference to the interesting notes by the Rev. F. C. R. Jourdain and Mr. Stanley Lewis (*antea*, p. 106), I give below details of my own limited experience, which is further evidence in support of the early breeding of this species in the south of England.

Date	County	Eggs or Young	Incubation of eggs or age of young (approx.)
14/5/1920	Berks	6 eggs	13 days
"	"	6 "	11 "
"	"	6 "	8 "
"	"	5 "	3 "
11/5/1924	Hants	5 "	Fresh
15/5/1924	Surrey	5 "	5 days
23/5/1924	Berks	6 "	13 "
21/5/1926	Surrey	7 " (all fertile)	6 "
26/5/1926	"	6 young	5 "

D. W. MUSSELWHITE.

MOTHS USED TO FEED YOUNG GRASSHOPPER-WARBLERS.

WHEN observing and photographing a pair of Grasshopper-Warblers (*Locustella n. naevia*) from a "hide" on June 8th, 1915, in Glamorganshire, we were interested to note that on two occasions within the space of an hour, one of the birds brought a moth, which was fed to one of the young, wings and all. On the second of these visits we were fortunate enough to secure a photograph of the bird with a moth in its beak, and it is possible to identify the species as the mother shipton (*Euclidia mi*), a day-flying insect which is common in May and June where wild flowers abound, and which was flying in considerable numbers in the more open parts of the

thicket where the nest was situated. The rest of the food brought, as far as we could see, was mainly flies and caterpillars, and the young at that date were approximately nine days old.

When discovered on May 29th, this nest held four eggs, three of which hatched, the other being addled. We also



GRASSHOPPER-WARBLER ABOUT TO FEED YOUNG WITH A MOTH.

(Photographed by G. C. S. Ingram.)

have records of three other nests where the full clutch was only four, and this may be worth recording in view of the statement in *A Practical Handbook* that the clutch is "normally six, very rarely seven, sometimes five."

GEOFFREY C. S. INGRAM.

H. MORREY SALMON.

EARLY BREEDING OF SEDGE-WARBLER.

ON May 6th, 1926, I found the nest of a Sedge-Warbler (*Acrocephalus schænobænus*), with the hen sitting on five eggs, at Fishbourne, West Sussex. The eggs had then been incubated for some time. Unfortunately, I have no note of the date of hatching, but I know there were young before May 17th. Subsequently, I saw the young birds flying about the osiers and being fed by their parents on June 5th, 1926.

RAYMOND CARLYON-BRITTON.

ABNORMAL SONG OF WILLOW-WARBLER.

ON May 27th, 1926, at Dale (Milford Haven), Mr. Charles Oldham and I observed a Willow-Warbler (*Phylloscopus trochilus*) whose song often varied greatly from the normal. This bird frequently indulged in a distinct outburst resembling part of a rapidly repeated, but curiously distorted, Chiffchaff's song—closely approximating in fact to the characteristic "chiff-chiff-chaff" notes, but with a noticeable difference in rhythm. On several occasions we heard him end up the normal Willow-Warbler stave with a gush of such hurried "chiff-chaff" notes instead of the usual "dying fall"; and once these notes actually preluded the Willow-Warbler strain, merging into it without any break. On the other hand, he often sang the typical Willow-Warbler song alone—once for a full quarter of an hour—with all the usual minute variations in modulation, speed, etc.

Watching this bird again on the next day we found his performance exactly similar: a spell of pseudo-Chiffchaff song (sometimes lasting for several minutes) succeeding a spell of pure Willow-Warbler song would be followed by a few staves of Willow-Warbler with "chiff-chaffy" interpolations, and so on. We noticed, however, that he never uttered the low and oft-repeated "chirp" note which generally forms part of the typical Chiffchaff's song at this season.

As the strip of territory occupied by this Warbler was immediately between those of two Chiffchaffs and all three birds were sometimes singing at the same time, it is of course possible that his apparently abnormal song-habit was merely due to imitation. In any case we have heard no other like it in this district, where Chiffchaffs are very abundant, outnumbering Willow-Warblers by at least two to one.

Accumulating evidence indicates the existence of remarkable variations—perhaps even some definite connection or

overlapping—in the songs of these two species.* All detailed records are therefore of particular interest to field-ornithologists, since they may ultimately lead to the identification of birds breeding in Britain as stray representatives of foreign local races with clearly differentiated song-forms.

BERTRAM LLOYD.

WILLOW-WARBLER AND UNLINED NEST.

HAVING recorded (Vol. XIX., p. 152) the nest of a Willow-Warbler (*Phylloscopus t. trochilus*) without a single feather, which I found last year near Plymouth, I was anxious to see if there was any repetition of this abnormal building in 1926. On May 3rd I watched a Willow-Warbler, accompanied by its mate, at work on a nest within about twenty-five yards of last year's site. When completed it also had no feathers, and I waited for the eggs to be laid before I could be certain that they would not be added. I had examined the nest most circumspectly in the absence of the birds, but to my disgust it was deserted at this stage. On June 3rd I discovered a second nest full of nearly fledged birds, within ten yards of the original 1925 nest, and I confidently foretold that I should find this unlined. Unfortunately for my theory this proved quite a mistake, as it was well lined.

But is it not probable that the first (deserted) nest was built by the 1925 female with her 1925 mate, that a mishap befell her and that the widower replaced her, introducing another bride to his territory ?

A. H. MACHELL COX.

SWALLOW'S NEST ON AN ELECTRIC LIGHT BULB.

IT may be worth recording that a nest of a Swallow (*Hirundo r. rustica*) was built on an electric light bulb hanging without a shade in an archway at the Kesteven Mental Hospital. Three young were successfully reared. The bird had a first brood in a nest in a normal position on a beam close at hand.

JOHN S. REEVE.

[For similar cases, cf. Vol. I., p. 354; Vol. II., p. 20; Vol. XIX., p. 131.—EDS.]

*Dr. E. Hartert records hearing the "dilm-dilm-delm" notes of the Chiffchaff tacked on to the song of a Willow-Warbler in Silesia. He also refers to similar observations by Pässler and Parrot, the latter of whom heard an unidentified Warbler ("Laubsänger") beginning and ending like a Chiffchaff and singing the Willow-Warbler's strain in the middle. (*Die Vögel der paläarktischen Fauna I.*, 509; 1903.) See also, e.g. H. Lynes on the Spanish Chiffchaff (*Ibis*, 1914, p. 304) and C. Ingram on the Song of Pyrenean Chiffchaffs (*Ibis*, 1926, p. 255); and, for the British Islands, notes by various observers in *The Zoologist*, 1908 (s.v. "Chiffchaff"), and in *British Birds*, XVI. (pp. 134, 161 and 227) and XVIII. (p. 117) as well as Vol. V., p. 74, on abnormal song of the Wood-Warbler.—B.L.

GREAT SPOTTED WOODPECKER AND NUTHATCH
NESTING IN THE SAME TREE.

IN Vol. XIX., p. 152, I recorded the fact that a pair of Great Spotted Woodpeckers (*Dryobates major anglicus*) and a pair of Nuthatches (*Sitta europæa affinis*) had for two years in succession reared their respective families in the same oak tree near Plymouth. In 1926 both brought off broods in the the same holes, for the third time. As they have escaped notice hitherto, it will be interesting to see if the performance is repeated yet again.

At a spot roughly stepped as 600 yards distant in the same wood, a Great Spotted Woodpecker in 1925 occupied another oak tree. This is a much larger tree, and it was only by careful watching that I detected a Nuthatch this year occupying a hole hardly visible from the ground and at a great height. It seems quite probable that this bird was in possession also in 1925, but this year the Woodpecker moved a little farther on.

A. H. MACHELL COX.

SNOWY OWL IN CO. MAYO.

A SPECIMEN of the Snowy Owl (*Nyctea nyctea*) was shot at Belmullet on July 27th, 1926. It had been observed frequenting a rabbit warren of tall, bare sand-hills for about two months previously, and I had spared it more than once when out with a fowling-piece. It is at present in the hands of Messrs. Williams & Son, Dublin, who report that it is a rather worn male, moulting into adult plumage and with but few black markings.

J. CRONIN.

PEREGRINES' UNUSUAL METHOD OF TRANS-
FERRING PREY.

ON August 28th, 1926, two Peregrine Falcons (*Falco p. peregrinus*) flew over my garden at Branscombe, Devon, one of which was carrying something considerably larger than a Pigeon. They were flying against a very strong east wind and the laden bird was in difficulties. When just over the house they began to scream, and I watched them come together, turn on their sides so as to face each other, and change over the prey, which we think was a three-parts grown rabbit. It was not dropped but taken direct from the claws of one by the other. The relieved bird at once left its companion and flew off in the direction of a favourite feeding ledge, the other following more slowly, and I saw them both turn in to where the ledge is situated.

LEWIS R. W. LOYD.

COMMON BUZZARDS BREEDING IN HAMPSHIRE.

WITH reference to Mr. C. W. Colthrup's note (*antea*, p. 28), it may perhaps be worth recording that this year, 1926, I have every reason to believe a pair of Common Buzzards (*Buteo b. buteo*) were successful in rearing a brood in Hampshire.

The nest was situated at the summit of a lofty fir, and when I discovered it on May 27th contained two young, about ten days old. Around the young lay portions of a small rabbit, and there was also a plentiful supply of fresh green fir twigs. In the interests of the birds I refrain from mentioning the precise locality.

HUBERT E. POUNDS.

[The Common Buzzard has been recorded as breeding in Hampshire in at least one locality for at least twenty-five years and in larger numbers prior to that date. See Meade Waldo, *Vict. Hist. of Hants*, I., p. 216; *Br. Birds*, X., p. 272, and XVI, p. 108.—EDS.]

MARSH-HARRIER IN SUSSEX.

ON September 23rd, 1926, while I was on the Downs east of Brighton, a large Harrier flew past me in an easterly direction. It showed no light rump and the top of its head was light coloured, apparently white in the evening sun, in contrast with its general deep brown colour.

I am familiar with Hen- and Montagu's Harriers and I have no doubt this bird was an immature Marsh-Harrier (*Circus æruginosus*). It was in full view of my field-glasses for a mile as it circled and flew away, mobbed persistently by a party of seven Rooks.

CHARLES H. BRYANT.

RARE BIRDS SEEN IN HAMPSHIRE.

SEVERAL birds worth recording have been observed in the summer of 1926 at Beaulieu, Hampshire. They are as follows :—

SPONBILL (*Platalea l. leucorodia*).—One seen on June 8th.

AVOCET (*Recurvirostra avosetta*).—Three were seen on August 20th on the tidal ooze of the Solent.

BITTERN (*Botaurus s. stellaris*).—One was seen on the wing by Lord Montagu at the beginning of August.

FLAMINGO (*Phænicopterus r. antiquorum*).—Major C. Paddon, who lives at Needs Ore Coastguard Station, while watching an aeroplane from a window on September 21st, saw a Flamingo about 1,000 feet up coming from the east. The bird flew down and pitched on a mud-flat of the Beaulieu river. Major Paddon at once called Col. Hodgkinson and

Captain Cheverton of the Indian Army, and all three took a big telescope down to the old coastguard boat-house, from which they were able to watch the bird for a long time feeding and preening its feathers. All three are well acquainted with Flamingoes. The bird may have been an escape, but as it came in from so high up this seems rather unlikely. It may be remembered that a Flamingo which appeared to be a genuinely wild one was shot at the mouth of the Beaulieu river in November, 1884.

THOMAS H. C. TROUBRIDGE.

GREY PHALAROPE IN SUSSEX.

WHILST cycling from Lancing College to Worthing on October 14th, 1926, I came across a Grey Phalarope (*Phalaropus fulicarius*) resting on the road close to a raised pathway almost in the town. I got off my bicycle and tried to drive the bird on to the beach but it simply moved out of my way. I stood within a yard of it for some time and watched it picking at the earth under the edge of the pathway. Eventually I managed to get it to fly on to the beach. It seemed rather tired but flew away fairly easily against the wind. On my return, about an hour and a half later, I found the bird back again at the same spot on the pathway.

H. W. FINLINSON.

GREY PHALAROPE IN CHESHIRE.

ON October 16th, 1926, at 4.30 p.m., I watched a Grey Phalarope (*Phalaropus fulicarius*) feeding on the Marine Lake at West Kirby at the mouth of the river Dee; I also saw one, I think the same bird, at Hilbre Island next day. W. WILSON.

BREEDING OF THE KITTIWAKE IN CORNWALL.

IN his "Notes from West Cornwall" (Vol. XVIII., p. 169), Mr. G. H. Harvey mentions the various places in Cornwall where the Kittiwake (*Rissa t. tridactyla*) breeds, or is stated to breed, amongst others the Gull Rock, Falmouth. I visited this rock in the middle of July, 1926, and sailed close in, right round it, as well as landing and spending a couple of hours photographing on it. There were no signs of any Kittiwakes there, though at Carn lês Boel, near Land's End, which he mentions as having been occupied by them in 1924, which I visited next day, I saw at least twenty nests with young still in them, as well as many young and adults flying to and fro, and alighting on the ledges.

CLEMENCE M. ACLAND.

LETTERS

DISAPPEARANCE AFTER NESTING OF THE PIED FLYCATCHER.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to the letter of Mr. Astley (*antea*, p. 112), this problem has, for many years, been waiting solution. I have searched and watched for the young Pied Flycatchers, but two or three days after the young leave the nest both parents and young disappear.

To my knowledge, only once has any evidence been given as to young ones remaining in, or near, the district where bred.

On June 21st, 1918, I ringed a brood of Pied Flycatchers. On August 4th, 1918, one of the birds was found freshly dead, apparently killed against the glass of a window, about one mile away from the nesting site.

Birds which nest in holes appear to keep their young longer in the nest than species nesting in open sites, thus, when they fly, they are stronger on the wing. I have noted young Great Tits remaining in the nest long after they seemed ready for flight. Is this also the case with Pied Flycatchers?

CATHARINE HODGKIN.

EARLY BIRD-MARKING RECORDS.

To the Editors of BRITISH BIRDS.

SIRS,—This extract from Bewick's *British Birds* is interesting as being possibly the earliest record of bird-marking:—

"In 1797, a gamekeeper of E. M. Pleydell, Esq., of Whatcombe, Dorset, brought him a Woodcock, alive. Mr. P. put a thin brass ring with date on its leg.

"Following winter Mr. P. shot this bird in the same wood."

Footnote, p. 63, Vol. II. (1805).

H. J. MOON.

[In point of date this Woodcock is beaten by a Swan, shot on Foulness Island, Essex, in Feb. 1776, and marked with a gold medal fastened to its neck, with the inscription "Le Roi Dame." The inscription is supposed to indicate that the bird was marked in Denmark. The record was published in *The Essex Chronicle* for 1776, and we are indebted to Mr. Miller Christy for drawing our attention to it.—EDS.]

BIRD'S-NESTING BANK VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—In a recent volume of *British Birds* (Vol. XVII., pp. 148, etc.), some correspondence appeared on the subject of an apparent habit of the Lesser Redpoll of destroying its nest when this has been disturbed and using the materials in constructing a new one, and cases of similar behaviour in some other species were recorded. Amongst other letters, one from Major W. M. Congreve (p. 192) described how he and the Rev. F. C. R. Jourdain and the present writer came across certain nests of the Mealy Redpoll at Hammerfest in 1921 which were

found the day after with the lining pulled up and disarranged and the eggs gone. The evidence that this was the work of the owners of the nests was of course inconclusive and was somewhat discounted by the fact that, as Major Congreve wrote, "an empty Fieldfare's nest and a Redwing's nest with two eggs, found June 16th, in one of the two localities" where the Redpolls' nests were, "were also disarranged and the eggs gone from the Redwing's." The possibility that Hooded Crows or Magpies were responsible was not excluded, though I am fairly certain that in one of the localities none of these birds were nesting near.

I re-introduce this subject in consequence of some discussion of the incident which I have recently had with Mr. George Tickner, of Oxford, a first-rate field-naturalist and exceptionally acute observer. He suggests that in such cases it is not always either the parents or egg-eating birds that are responsible, but that nests may be treated in the manner described by marauding voles or field-mice. He informed me that he had come across instances where the nests and eggs of small birds had been treated in just such a fashion by voles and that he had disturbed the animals in the act. From his description it seems clear that the species in question is the bank vole (*Evotomys glareolus*) and this is what would be expected, since this rodent is more or less omnivorous, has already been recorded as occasionally destroying young birds, if not actually eggs (Victor Fatio, quoted in Barrett Hamilton—*British Mammals*, p. 415), and is a competent climber, while the clumsier short-tailed or field vole (*Microtus agrestis*) is, normally at any rate, vegetarian and does not climb.

This year Mr. Tickner has paid special attention to this question of depredations on nests by voles, with the following results:—

1. In the case of a Blackbird's nest a vole was actually seen eating the eggs, one being already cleared out and another bitten into.
2. Another vole was disturbed at a Linnet's nest which had previously contained three eggs. Only the shells were left and the lining was pulled up.
3. A third was seen emerging from a Chiffchaff's nest which had previously contained two eggs, and on a second visit it was found that it had made the deserted nest into a nest for itself.
4. A second Chiffchaff's nest was completely demolished and the eggshells scattered. No vole was actually seen at this nest, but less than twelve yards away was a Hedge-Sparrow's nest in which the eggs had been destroyed and the lining pulled up, and a vole was seen coming along the bramble stems close to this.

These observations are in themselves deserving of record, but it will be evident that they have also a bearing on cases like that recalled at the outset. When nests are found treated in the way described by some non-human agency and the ordinary, well-known egg-robbers, like Crows, Magpies or Squirrels, can be excluded, it is not unnatural to conclude that the owners must be responsible, and this has, of course, been definitely established in some cases, but it seems clear from the above that there may sometimes be an alternative explanation.

In the particular instances quoted I should hesitate to suggest that all of the nests were raided by voles, but the possibility that the observed depredations may have been in part the work of *Evotomys rutilus*, which replaces our bank vole in north Europe, is not unworthy of consideration. In any case it would be of interest to know whether

other ornithologists can report similar experiences with bird's-nesting voles. That voles (and mice) will make nests for themselves out of old nests of birds is quite well known, and that the bank vole will on occasion destroy the eggs in occupied nests is not, I think, really a new observation, although Barrett Hamilton does not mention such a habit. But Mr. Tickner's experience in the course of a single spring, in conjunction with other cases which have come under his notice previously, suggest that it cannot be even unusual.

OXFORD.

B. W. TUCKER.

Corrigendum.

NEW BREEDING RECORDS FOR BRECONSHIRE.—*Antea*, Vol. XX., p. 104, line 22 from bottom: for "about 1,000 ft." read "about 1,600 ft."

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SOME BREEDING-HABITS OF THE LAPWING.

BY

R. H. BROWN.

THESE notes on certain breeding-habits of the Lapwing (*Vanellus vanellus*) are based on observations made during the past three years in Cumberland, and all generalizations made apply only to the writer's experience.

A. COURTSHIP.

I. *Pre-Mating Ceremonies*:—The pre-mating courtship of the Lapwing extends over the autumn and early winter months, usually from September until February, in some cases from August onwards; no pre-mating ceremonies were seen earlier than the first week of August, although a certain amount of "scrapping" was noticed amongst some individuals of the flocks assembled in July. As long as the weather remained mild and open, the flocks (most held varying numbers of adults and young, but some had a majority of adults, in others the young were in the ascendant) annually frequented certain pasture and meadow fields during their stay in the district and generally no Lapwings bred in these fields the following summers. When hard frost set in, numbers left the district and those remaining spread themselves about the adjacent fields in pairs and singly; whilst if the frost was very severe all left the neighbourhood. It is probable that the birds watched during the periods August—October consisted of birds reared in the neighbourhood, whilst from October onwards Scottish breeding birds may have been present.

Most pre-mating courtship was seen on the fine, sunny days following frost, especially if the frost had just begun, but courtship was also observed when snow was on the ground, a cold wind blowing, or on days of intermittent rain. The most obvious sign that pre-mating ceremonies were proceeding was the behaviour of the birds*: a continuous calling of "peet" and "pee-wit" indicated a varying amount of courtship. Although a flock might rise, fly around, and settle in a field several times a day, certain individuals were noted always to return to the same piece of ground and keep off any intruders. These birds mainly had their territories on the outskirts of the flock and both males and females thus occupied territories, the males apparently in order to display

*No young birds seem to participate in these pre-mating ceremonies.

to the females, but the reason for the females occupying territories was not discovered, although some females were noticed displaying. When a Lapwing was in occupation of a territory and another alighted or attempted to alight on this ground, the occupant assumed an attitude of hostility, *i.e.* head lowered, body and tail elevated, wings rather open, often pecking at the ground and calling a shrill "peet." If the Lapwing alighted, fighting usually began, the combatants striking at one another with wings and feet, occasionally varying this by swooping down at each other. Such fights often lasted intermittently for over half-an-hour. When the female was in possession of territory she usually drove away the male by running at him, the male always retreating, often with wings uplifted.

The males generally displayed when the females were close at hand, but they rarely took any notice, often moving away when the males began. Usually a male was in possession of territory before he displayed and either waited until the female entered his domain or else tried to attract her attention by displaying on the edge of his territory. The fighting between males over a territory was presumably in order that the victor might display to the females, but this does not explain why the females fought for territory when they did not display. Sometimes a male would approach a male and female and display, the other male replying with a like display. There was a certain amount of individual variation in the display, but usually it began with the male picking the grass, then scraping the ground with his feet and going forward on to his breast, which was moved up and down on the ground or else in a circular manner from right to left, whilst the wings were held wide apart and the tail elevated to show the bright tail-coverts. Usually the males uttered a shrill "peet-peet-peet" during this display; on several occasions birds assumed to be females displayed in a like manner and then attacked and drove away in succession several males. On one occasion when a male had displayed to a female he struck and fought with her.

Besides this display on the ground, males would occasionally give an exhibition of their tumbling-flight, uttering part of the spring song whilst doing so. Also, just before dusk, the flock would often go through aerial evolutions before settling for the night.

2. *Post-Mating Ceremonies*.:—Although the flocks were watched for three autumns it was not discovered how the females accepted the males, but when the birds began to

arrive on their breeding-grounds in the spring many were seen to be in pairs, and it was assumed that these birds had paired-up during the autumn and early winter. This habit of sometimes arriving in pairs on the breeding-grounds is not confined to the Lapwing, as the same fact has been noticed with the Redshank, Sandpiper and Curlew. It is possible that some Lapwings pair for life (during the autumn when a single bird left a flock, another was noticed to fly up and accompany it), others may take a new mate every two or three years or even each year, but, however they pair, all the males perform the post-mating courtship and as this particular phase of the courtship is confined almost entirely to the males, it appears it is done in order to arouse the excitement of the females so that they will allow sexual union. Lapwings began to visit their breeding-grounds from the middle of January onwards, but settled occupation was not noted before the second week of February (this applies to land about three hundred feet above sea-level; land at higher altitudes was occupied later in the month). The display of the paired male took place in the presence of the female: generally the female was behind the male, sometimes in front, or else standing by him. The display began by the male pecking the grass in front of him until the ground was bare, throwing the grass over his back, then, using his feet, he scraped away the top soil, often moving his body up and down, and then going forward on to his breast, moved it up and down or else in a circular manner from right to left until a definite hollow was formed, when his tail was sharply depressed and his feet moved with great rapidity to clear the hollow. During this performance the bird usually uttered a rapid, shrill "peet-peet-peet" and often threw grass or soil over his back. After his display it was usual for the male to perform his tumbling-flight and give his spring-song of "pēes-wēep-wēep-wēep, pēes-wēep."

On one occasion a male displayed when some distance from the female, then flying to her, displayed a few feet in front of her and returning to his original position was followed by the female. In another case the female put the male to flight, then alighted beside another female and began moving her body up and down as if about to display, but another male passing over she made the "hostility" sign, then returned to her mate.

Unmated males tried to obtain mates by displaying before a pair, the paired male usually answering with a display and then driving the other away, whilst if an unpaired male

displayed towards a paired female when her mate was absent she usually replied with the "hostility" sign.

More fighting was noticed during the pre-mating courtship than the post-mating, and what little there was appeared to be due to sexual rivalry, as when an unmated male in the presence of her mate tried to display towards a paired female, or when a paired male, evidently desiring copulation and refused by the female, fought with her. Each pair apparently had a definite territory (the females showed themselves as little as possible) but mainly as a nesting-site, as four or five pairs would nest on a quarter-acre of ground and once the young were hatched, the adults and their broods seemed free to move wherever they liked. The presence of a Crow or Rook was a signal for all the males to rise and attack it.

3. *Nest-Building*:—The first part of the nest-building, the making of the nest-hollow, was done by both sexes and appeared to be part of the post-mating courtship. The hollow was made by both birds performing as in the post-mating display: first the male scraped out part of the hollow, performing as above described, whilst the female stood beside him and threw grass or soil over her back; then the male left the nest-hollow, the female took his place and with rôles reversed both performed as previously described. The birds worked on until the hollow was formed, but the lining of the hollow was not seen and may only have been done by the female. When the birds have to lay a second or third clutch they may utilise one of the scrapes made by the male when displaying. Occasionally a female was found brooding on an empty nest.

B. SEXUAL UNION.

Copulation was seen on many occasions but never after any post-mating display by the male, and generally the male, some distance away, flew to and alighted beside the female, copulated, then either flew away or else both birds ran forward in different directions or even flew away. Usually copulation was performed in silence but exceptions were noticed. Thus a female assumed the coition-attitude, called a rasping "peet," the male flew to her, copulated, then walked away; on another occasion both birds uttered a rasping "peet" before pairing.

Three exceptions to the above generalizations were seen. A male, some distance from the female, began walking towards her, uttering all the time a rasping "peet," and arriving beside her, the female assumed the coition-attitude, copulation occurred, then the male alighted to one side, raised his

wings to their fullest extent, then flew about twenty yards and on alighting made the post-mating display. Another male uttered the " peet " note, flew to and alighted behind the female and was about to copulate when he noticed the writer and thereupon flew away some distance and made the post-mating display. A male, flying about, suddenly alighted beside the female, copulated, then flew away. After some time the female flew to where the nest with one egg was, and began pecking grass and throwing it over her back.

C. INCUBATION.

Incubation seemed to be mainly the work of the females, but on two occasions a male was seen incubating. In the case where both sexes incubate the writer does not know whether there is any nest-relief ceremony. With most pairs the duty of the male was to keep guard, warn the female of the approach of human beings, and attack any bird that passed over the breeding-ground. The average incubation-period is twenty-four days, and incubation proper does not begin until the clutch is laid, although the eggs may be brooded a few hours each day, and usually each night, during the laying-period.

Pair No.	Last Egg.	Eggs Hatched.	Incubation-Period
			Days.
1.	April 10	May 4	24
2.	April 13	May 7	24
3.	April 5	April 29	24
4.	May 3	May 27	24

Full clutches are general from the last week of March onwards, and if the first clutch is taken a second is laid; if the second is robbed presumably a third clutch is laid, as day-old nestlings may be found each year from the last week of April until the first week of July, but possibly the chicks from a third laying are not so hardy as those from a first or second laying.

D. CARE OF YOUNG.

As soon as the eggs begin to chip both adults become very demonstrative, swooping down to the intruder and, with sheep or dogs, often striking them, whilst uttering their " pēe-wit " or " pēe-ēē " and trying to entice the intruder away by feigning injury or pretending to be brooding young. These actions are continued during the fledging of the nestlings, whilst the other breeding birds usually flock overhead and add their cries to the parents' calls. Sometimes the male, in his excitement, gives the breeding-song.

With most broods the young remain together until feathered, both adults feeding and guarding them, but the females usually brood them, although occasionally males were noticed brooding young. The Lapwing thus differs in its method of rearing the young from the Curlew where, when the four eggs hatch, the male often takes two young, the female the other two, and the family does not unite until the young are partly-feathered, by which time there are often only one or two left.

Generally, the nestlings are brooded during the day until about twelve days old and at night until sixteen days, but no doubt the weather has a great effect upon the amount of brooding, because in dry warm weather the young will not be brooded so long as in cold wet weather.

E. THE YOUNG.

The young Lapwings usually stay in the nest until their down is dry and for the first few days do not go far away, but afterwards appear to move freely about the field and, if the field adjoins a road, the adults may lead them across it into the adjacent field. From birth, the nestlings crouch as soon as the adults give the alarm, although in their first days one or two nestlings in each brood will often run a few yards before crouching, and this crouching is maintained until the danger is past, while it is persisted in until the young are able to fly. When handled, on being released, the young usually crouch, although sometimes they run off to a fresh hiding-place, but are more likely to do this when feathered. It is rarely that the young seek hiding like young Redshanks nor is it general for them to answer the adults' calls as is the way with young Curlews or Sandpipers. The nestlings are expert swimmers.

F. AVERAGE BROOD REARED.

It is not easy to estimate accurately the average brood reared, for although four young are generally hatched, it is certain that very few, if any, pairs rear the full brood. In the past three years the writer has ringed three hundred and thirty nestlings or young birds, but dividing this number by the number of pairs of adults would not give the average brood reared, as in April and May the broods consisted mainly of four downy nestlings, whilst from June onwards the average brood was one or two partly-feathered young. Possibly the average brood reared is about two.

Carrion-Crows (*Corvus c. corone*), Rooks (*C. f. frugilegus*) and Jackdaws (*Colæus m. spermologus*) are the worst enemies

of young Lapwings as their keen eyes readily detect the white napes of the nestlings. When the adults give the alarm the brood, even if only a few hours old, usually crouches at once and remains thus until the danger is over. However, one or two nestlings will often run a few yards before crouching, thus inviting disaster, as their white napes reveal themselves to the passing Crow or Rook.

G. FLOCKING AND MISCELLANEOUS NOTES.

Adults and young begin to flock from the third week of June onwards; the earliest date the writer has for flocking is June 9th. In common with other species, Lapwings occasionally pay visits to their breeding-grounds during the autumn and early winter months.

During the winter months Lapwings consume many earthworms which they catch by listening for them.

The Common Gull (*Larus c. canus*) and the Black-headed Gull (*L. r. ridibundus*) are parasitic on the Lapwings during the winter. The procedure is for a Gull to approach closely a Lapwing busy pulling an earthworm or grub out of the soil and as soon as the Lapwing is successful give chase to it until the Lapwing either drops its prey or eats it.

Rooks, from their numbers, probably commit more havoc amongst the Lapwings' eggs than either Carrion-Crows, Jackdaws, Magpies (*Pica p. pica*) or Jays (*Garrulus g. rufitergum*).

PROPORTIONS OF MALE AND FEMALE DUCK ON TAY ESTUARY, 1910-1925.

BY

HENRY BOASE.

STATISTICS of numbers in the study of birds are not often available. This is the apology the writer offers for the accompanying table showing the approximate proportions of male and female met with of some of the commoner duck. It is, unfortunately, incomplete in many respects: it represents the summary of a long series of records made under conditions good and bad, and it does bear out, in cold figures, various peculiarities of proportion and distribution in a manner more compact than mere generalities in writing could convey.

There are, of course, weaknesses in the statement. It is not possible in ordinary field work with a binocular to distinguish in most cases between juvenile and female; accordingly these are grouped together. There is also the eclipse plumage of the male which may affect the figures for September; probably only Goldeneye, Goosander and Merganser are involved however.

Broadly speaking, these ducks show the three possible variations—Mallard (*Anas p. platyrhynchos*), an equality of ♂ and ♀, Wigeon (*A. penelope*), Scaup (*Nyroca m. marila*) and Goosander (*Mergus m. merganser*), an apparent surplus of ♀, and the rest, a varying surplus of ♂. Teal (*A. c. crecca*) has not been included as it does not occur normally on the lower Tay Estuary. In certain cases it has been deemed advisable to give two figures, one of which represents the average, the other the result, when certain apparently abnormal records are excepted.

The equality of numbers of ♂ and ♀ Mallard is rather puzzling in some respects. Counts made at different seasons, both on fresh water and salt, have always given the same result, and the break-up of the wintering flocks has left a mere handful—not a dozen—probably consisting of two-thirds female which may or may not linger on salt water until lost among the males which come down for a period from the end of May until the approach of moult sends them into hiding. What becomes of the young of the year is not clear; of course, the young males assume a plumage similar to the adult their first autumn, yet the proportion of ♂ to ♀ in the various broods must be well maintained. There is another way of looking

at it, however, and that is the probability that many of the local nesting birds drift away in early autumn and their places are taken by immigrants, in many cases at least, already in pairs. Sometimes the September records seem to show this.

The Wigeon tends to be a bird of passage as the records show, but there is no doubt that adult males are relatively scarce at both passages, and the few records of relative numbers on fresh water show the same peculiarity.

The Shoveler (*Spatula clypeata*) is included, although material is so scanty, for the reason that the March figure is confirmed by records on fresh water. These are not given because the growth of cover renders counting quite hopeless, but the surplus of drakes is demonstrated by the amount of display and war-like excursions, which continue well into May.

Pintail (*A. a. acuta*) records refer to passage birds in spring; the figures give hint of females lingering over the winter.

The Pochard (*N. f. ferina*) seems to run to excess of males at most seasons, why is not clear. It has nested on a loch in south-west Forfarshire in 1925 and 1926; it attempted to do so on a neighbouring loch in 1917, and, although common at all seasons, except June, it does not appear to be breeding at all freely. Whence the males come from in July to local lochs (2.7-1) the writer has, so far, not discovered. This bird is certainly extending its range and appears to take a long time to settle down.

The Tufted Duck (*N. fuligula*) shows some of the peculiarities of the Pochard. Like it, it appears that the sexes tend to separate during the winter, with a distinct preference for fresh water on the part of the females in the case of the Tufted Duck. Probably, this duck also is pressing on to new ground. The figures for fresh water are given for this, for the Pochard and for the Goldeneye (*Bucephala c. clangula*), and show interesting differences.

The Scaup, Goldeneye and Long-tailed Duck (*Clangula hyemalis*) do not show any very marked peculiarities. The material available for the first and last is not great. The Goldeneye has apparently nested in Perthshire in recent years.

The figures for the Eider (*Somateria m. mollissima*) are at first sight rather remarkable. Clearly there are complex influences at work. Unfortunately, little or no material is available for December, which appears to be a critical period. The writer is inclined to suspect the November

figures, knowing well that the male is so much more conspicuous than the female, and the dull haze of winter does not help. From records of October, particularly the first half, it appears that the males pack far more than the females. In one case, at least, while males were certainly in the vast majority and in close packs, the females were scattered over the wide shallows rather than in the narrow flows preferred by the males, and so had to be looked for. On the Tay Estuary, probably 100 pairs or so nest, and by the end of July all the young birds are away to better feeding grounds among the rocks further north, accompanied by the females, while the birds remaining are apparently the males in eclipse. By September the family parties are scattering, but the separation continues until early in the year. Whether the tendency for display during the winter brings about some pairing and consequently an increasing tendency for females to join the packs is perhaps a speculation, but it may be so far correct. The writer has discussed some of the peculiarities of numbers in April and May (see Vol. XIX., p. 46) when dealing with the courtship.

The material regarding the Common Scoter (*Oidemia n. nigra*) and Velvet Scoter (*Oi. f. fusca*) is very scanty, but, such as it is, it points to a marked excess of males.

The Goosander and Merganser (*M. serrator*) show rather an interesting contrast. Whether the relative breeding ranges of these two species has anything to do with it is a speculation. The Goosander nests, or endeavours to do so, over most of Perthshire, and presumably will come to salt water in winter. The excess of females rather indicates that the Tay is also on the southern margin of its wintering as well as breeding range. Its tendency to wander, and indeed its whole character, seems far less energetic than its commoner relative, the Merganser. Just where its headquarters are in winter, in Scotland, is a matter of doubt, and the records available do not point to the open sea as a usual habitat, nor even the less turbulent but yet fully maritime areas within the bar, anyway so far as Tay is concerned. The Merganser finds much of its feeding ground in the shallows over sand at the bar of Tay, as well as the less exposed areas up river outside the areas of mud.

The question in general raised by these figures is "what are the habits of these birds outside the breeding-season?" Most of them leave fairly well-defined breeding areas and vanish into the unknown for the most part during the remainder of the year. They offer some interesting little problems for those in a position to investigate them.

PROPORTION OF MALE AND FEMALE DUCK ON TAY ESTUARY

OVER PERIOD 1910-1925.

NAME.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	M'ch.	April	May	Remarks.
Mallard ...	...	...	All months ♂=♀							{ In October, ♀ sometimes appears to be in excess; probably ♂ still in eclipse. April/May records insufficient. Only two records on salt water. *Only January record a ♀. Records on fresh water. †See below. Few records March, April, May. Records on fresh water; *1.2-1 if 1925 [excepted. †See below. Records on salt water in May few. One record June ♂; one August, a ♀. February/March period of most records. Records on fresh water few. *1919 excepted—1.75-1. April records most numerous. Largest numbers, Mid-Sept. to end Nov. Scanty material available. Very little material concerns males only—mostly October. †1-50 without 1924 records. ‡May include ♂s. eclipsed. *1-60 without 1921 records.
Wigeon ...	...	1-3	1-2.6	—	—	1-2	1-1.7	—	—	
Shoveler ...	...	1-1	—	—	—	—	4-1	—	—	
Pintail ...	...	1-1	—	—	*	1-1.2	1.4-1	1.1-1	—	
Pochard ...	{ 4.7-1	2-1	4-1	—	—	4-1	2.3-1	1.4-1	1.1	
						†				
			1.2-1	2.8-1	1.4-1	1.4-1	♂ only	2-1	♀ only	
	—	1-1	1-2.6	1-2.6	—	1-1	1.5-1	1.6-1	—	
Tufted Duck	{					†	*			
	—	—	2-1	2.6-1	2.9-1	2-1	3-1	1.3-1	♀ only	
Scaup Duck	1-2.5	1-7	—	1-1.2	1-1.5	1-2.8	1.3-1	2-1	♂ only	
Goldeneye	{ All ♀	1-6	2-1	—	—	1.3-1	1-1.2	1-1.8	2-1	
		1-4.3	1.1-1*	3-1	1.5-1	1.1-1	1-1	1-1.2	1.75-2	
Long-tailed Duck	—	—	All ♀	—	—	All ♂	1.5-1	3.2-1	1-1	
Eider ...	6-1	4-1	4-1	—	1-3	1-2	1-1	2-1	4-1	
Scoter ...	4-1	3-1	—	—	—	—	All ♂	4-1	—	
Velvet-Scoter ...	—	—	—	—	—	—	—	—	—	
Goosander	† All ♀	1-20†	1-70*	1-1.5	1-1.2	1-1.5	1-2	1.3-1	—	
Merganser	... 1-2.5	1-11	1-1.5	1.2-1	1.3-1	1.9-1	1.3-1	1-1.1	1-2.2	

The figure for the ♂ is given first in each case, *e.g.* Wigeon in October were in proportion of one male to three females.

Figures for Pochard and Tufted Duck for February are affected by presence of abnormal numbers of ♀ in 1917; neglecting these, the figures become:—Pochard 2.2-1, Tufted Duck 3-1.

FLEDGING-PERIODS OF SOME BRITISH BIRDS.*

BY

T. G. LONGSTAFF, M.D. AND REV. F. C. R. JOURDAIN.

FOR the completion of eight of the following cases for 1926 I am indebted to Miss Marjory Scott, who observed them daily from June 9th to June 14th, during my absence from home (New Forest). The cases of Linnet, Robin No. 2 and Mistle-Thrush No. 2 are from Colonel J. E. H. Sawyer of Burwash, Sussex. The second Garden-Warbler and the Pied Wagtail are unassailable cases from Mr. Ian Bennett, New Milton, Hants.

The last days in the nest are particularly dangerous and, when the nest is found empty, particular search must be made for any signs of marauders; no case appreciably shorter than the average should be recorded unless this source of error can be eliminated. The stage of feather growth and the behaviour of the nestlings must be carefully noted daily so as to gain a good idea of when they will be ready to fly, but great care must be taken not to frighten them out of the nest prematurely. The perfect case is obtained when they fly as you approach the nest. I think that it is advisable to record the incubation-period whenever possible.

		Incu- bation.	Fledging- period.
Chaffinch (<i>Fringilla c. cælebs</i>) ...	—	—	14
Linnet (<i>Carduelis c. cannabina</i>) ...	—	12	10
Lesser Redpoll (<i>Carduelis l. cabaret</i>)	No. 1	10	14
" " " " "	No. 2	10	13
Pied Wagtail (<i>Motacilla a. yarrellii</i>)	—	—	15
Great Tit (<i>Parus m. newtoni</i>) ...	No. 30	16	—
" " " " "	No. 9	14	18
" " " " "	No. 4	14	20
" " " (very close sitter)	No. 13	12	16 or 17
" " " " "	No. 23	—	17
Blue Tit (<i>Parus c. obscurus</i>) ...	No. 14	14	21
" " " " "	No. 24	13	18 or 19
Whitethroat (<i>Sylvia c. communis</i>)...	No. 1	12	10 or 11
" " " " "	No. 2	—	10
Garden-Warbler (<i>Sylvia borin</i>) ...	No. 1	12	—
" " " " "	No. 2	—	9½

* Previous contribution BRITISH BIRDS, Vol. XIX., No. 10, pp. 249-251, March, 1926.

				Incubation.		Fledging-period.
Willow-Warbler (<i>Phylloscopus t. trochilus</i>)	...	...	...	—	—	13
"	"	"	No.	2	14	13
"	"	"	No.	3	—	12 or 13
Mistle-Thrush (<i>Turdus v. viscivorus</i>)			No.	1	—	17½
"	"	"	No.	2	13	15 to 16
					to	
					14	
Robin (<i>Erithacus r. melophilus</i>)	...	No.	1	—		14
"	"	No.	2	14		16
Wryneck (<i>Jynx t. torquilla</i>)	...			12		19

Taking into consideration the figures I gave for last year, the Wryneck may now be accepted as having an incubation-period of eleven to twelve days, and a fledging-period of eighteen to nineteen days. The Great Tit is apparently variable, but I consider its fledging-period is definitely shorter than that of the Blue Tit, which is normally twenty-one days. It is easy to see that variations in food supply, brooding, or even mere temporary weather conditions could alter the length of the fledging-period; but on physiological grounds we should assume that the specific incubation-periods are constant. Colonel Sawyer sends me details of a rare case of apparently prolonged incubation:—a Robin in his garden had four eggs on April 16th, 1925; five eggs on April 17th; hatched May 6th; apparent "incubation-period nineteen days, which seems incredible, but I am quite sure of it as I looked at this nest every day" (J E.H.S.). I conclude that this was a case of incubation being delayed for a few days after the clutch was complete, comparable to the commoner cases of laying being delayed long after the nest has been finished. In the case of my Great Tit No. 13, the first egg hatched on June 10th, giving incubation only twelve instead of the normal fourteen days; but on June 16th there were still only three young, the other four eggs hatching later. This bird proved to be an exceptionally close sitter, and I take the case to be one of incubation commencing unusually early—even for a Tit—and the discordance is thus explained. My Great Tit No 30 is presumably an example of the converse phenomenon of slightly delayed incubation; unfortunately, this particularly noisy brood was taken by a small carnivorous mammal on the 12th day.

T.G.L.

It seems very desirable, as suggested by Dr. Longstaff, in collating results of observations on incubation- and fledging-periods, to have both periods recorded together as far as possible. Some of the prolonged incubation-periods recorded are almost certainly due to variations in the date on which serious incubation has begun. A bird with an obviously incomplete clutch is found on the nest and one is tempted to think that she is necessarily about to lay, when she may have already begun to sit. Another bird may begin to sit immediately on the deposition of the last egg, while others take a rest of varying length before the serious business begins.

The following notes refer to the species observed by Dr. Longstaff :—

CHAFFINCH. Mr. R. H. Brown estimates the *fledging-period* at 13 days. (14 T.G.L.)

LINNET. *Incubation-period* (12 J.E.H.S.). W. Evans found eggs hatched on the 14th day from the laying of the last egg; R. C. Boulton on the 13th day. *Fledging-period* (10 J.E.H.S.). R. C. Boulton estimates it as 12–13 and 13–14 days in two cases.

LESSER REDPOLL. *Incubation-period* (10 T.G.L.). This is given as 10–11 days by G. C. S. Ingram; 11 days by A. Taylor, and 12–15 days by J. A. Walpole-Bond. *Fledging-period* (13, 14 T.G.L.). G. C. S. Ingram gives 11–12 days and T. G. Longstaff in previous paper 12–13 days.

PIED WAGTAIL. *Fledging-period* (15 I.B.). 13 days (S. E. Brock).

GREAT TIT. *Incubation-period* (16, 14, 14, 12 T.G.L.). Previous records are 12, 13 days (C. K. Siddall); end of 14th day in incubator (W. Evans). *Fledging-period* (18, 20, 16 or 17, 17 T.G.L.) Here the differences are great, but possibly in the case of large clutches the female may take a rest before incubating, and in some cases incubation may begin before the clutch is complete. Previous records, 14, 15, 15 and 16 (T. G. Longstaff); second layings 17 or 18 (*id.*); fledged in 21 days and left nest on 23rd day (C. K. Siddall); 23 days (F. C. R. Jourdain).

BLUE TIT. *Incubation-period* (14, 13 T.G.L.); 14th day (1 egg), 13–14 days from laying last egg (W. Evans). *Fledging-period* (21, 18 or 19 T.G.L.). 19 days in two cases (C. E. Alford); 21 in three cases (T.G.L.).

WHITETHROAT. *Incubation-period* (12 T.G.L.); 1st half of 13th day in incubator, 11–13 days from last egg (W. Evans); 11–12 days (S. E. Brock); H. E. Howard gives

- 10-15 days! *Fledging-period* (10 or 11, 10 T.G.L.); 11 days (S. E. Brock); 12 days (R. H. Brown).
- GARDEN-WARBLE. *Incubation-period* (12 T.G.L.). About 12 days (H. E. Howard). *Fledging-period* ($9\frac{1}{2}$ I.B.). 9-10 days (H.E.H.).
- WILLOW-WARBLE. *Incubation-period* (14 T.G.L.); 12-13 days (S. E. Brock); 13 days (J. H. Owen), end of 13th day in incubator; 13, 13, 14, 16 from last egg (W. Evans); 13, 14 (R. H. Brown). *Fledging-period* (13, 13, 12 or 13 T.G.L.); 13-14 days (S. E. Brock); 12-16 (J. H. Owen); 10-11 in one case (W. B. Arundel); 13, 13 (R. H. Brown).
- MISTLE-THRUSH. *Incubation-period* (13-14 J.E.H.S.); 13-14 (S. E. Brock); 15th day in incubator (W. Evans); 14 (N. M. Richardson); 14 (R. H. Brown). *Fledging-period* ($17\frac{1}{2}$ T.G.L., 15-16 J.E.H.S.); 13-14 (S. E. Brock); 15-16 (N. M. Richardson); 15 (R. H. Brown). Combined incubation- and fledging-periods 29 (S. G. Cummings). Brock's estimate is evidently too low.
- ROBIN. *Incubation-period* (14 J.E.H.S.). 14th day in incubator, 12-14 (mostly 13) from last egg (W. Evans); 13-14 incubator (*id.*), 13 (R. H. Brown). *Fledging-period* (14, T.G.L., 16 J.E.H.S.); 11-13 (R. H. Brown); 12 (T. G. Longstaff); 13 (R. H. Brown); 14 (O. J. Wilkinson).
- WRYNECK. *Incubation-period* (12 T.G.L.); 11 days from last egg to first egg hatched (T.G.L.). *Fledging-period* (19 T.G.L.); 20, but one bird remained a week later (S. K. Barnes); three weeks, but one remained three days later (J. H. Salter); 18, 19 (T. G. Longstaff).—F.C.R.J.

NOTES

THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

THE following small list of incubation- and fledging-periods I have obtained this year (A) near Chichester, Sussex, and (B) near Marlborough, Wilts.

Species	Cases	Incubation- period in days	Fledging- period in days
B. Carrion-Crow (<i>Corvus c. corone</i>) ...	I	—	30
A. Linnet (<i>Carduelis c. cannabina</i>) ...	I	—	12
B. Chaffinch (<i>Fringilla c. cœlebs</i>) ...	I	11	—
A. Song-Thrush (<i>Turdus p. clarkei</i>) ...	2	12 and 12	—
B. Song-Thrush (<i>Turdus p. clarkei</i>) ...	I	—	13
A. Redbreast (<i>Erithacus r. melophilus</i>) ...	2	14 and 13	—
B. Kestrel-Hawk (<i>Falco t. tinnunculus</i>) ...	I	—	29

W. SHAW.

[Most of the above estimates agree fairly well with previous records. We have little definite information as to the fledging-periods of the Accipitres. Miss Turner estimates that of the Kestrel at about six weeks, but in confinement it has been observed to take 32-33 days.—F.C.R.J.]

GREAT TIT EATING NUTS.

I HAVE a little nut-grove in my garden at Lowdham, Notts., and this year a large proportion of the nuts were eaten. I thought we had been visited by Nuthatches, which are rare here, but a few days ago I watched a pair of Great Tits (*Parus m. newtoni*) which nest regularly in the garden, and saw one of them take a nut up on to a ledge on a lime tree and peck it like a Nuthatch. I cannot hear of anyone else who has seen Great Tits eating nuts. CHAS. E. PEARSON.

WHITETHROAT BREEDING IN CAITHNESS.

ON June 8th, 1926, Mr. A. Brook and I found a nest of the Whitethroat (*Sylvia communis communis*) containing five eggs at Dunbeath, Caithness. The nest was placed among meadow-sweet which was growing in a marshy spot on the top of the cliff within 200 yards of Dunbeath Castle.

The *Practical Handbook* (Vol. I., p. 372) states that in Scotland this bird "is thinly distributed and local in north, apparently not breeding in north Sutherland or Caithness."

H. A. GILBERT.

PEREGRINE'S UNUSUAL METHOD OF TRANSFERRING PREY.

IN my *Birds of the Riviera* (p. 77), I have described an incident very similar to that recorded by Mr. Lewis Loyd (*antea*, p. 155). In this case a Tiercel was circling in front of his eyrie with a bird in his claws. As soon as the Falcon appeared she snatched the prey from him in mid-air and carried it immediately to the eyrie, which contained young birds.

COLLINGWOOD INGRAM.

COMMON BUZZARD HOVERING.

ON September 7th, 1926, whilst in the Isle of Skye, I watched three Common Buzzards (*Buteo b. buteo*) slowly quartering a mountain side. Every now and then one of the birds would hover absolutely motionless exactly in the manner of a Kestrel but with slightly less flapping of the wings. The length of the "hovers" was somewhat shorter than that of the Kestrel—10, 15 and 35 seconds being recorded, whereas a hover of 1-1½ minutes is not unusual with the latter bird. A fairly strong wind was blowing at the time and the birds would quarter the slope against wind and then, sailing down wind, recommence their search over the same ground.

I do not remember ever before having seen Buzzards hovering, as distinct from soaring, nor can I recall any mention of the habit in any of the standard books, but perhaps other readers of *British Birds* are familiar with it.

It seems worth mentioning that, while watching these Buzzards, I enjoyed the unusual experience of having two Ravens, two Buzzards and two Kestrels in the field of my binoculars at the same moment.

W. H. THORPE.

SCAUP IN HERTFORDSHIRE IN SEPTEMBER.

FOR an hour or more on September 19th, 1926, I watched an adult male Scaup (*Nyroca marila*) diving close inshore at Wilstone Reservoir. The Scaup is a rather uncommon winter visitor to the Tring waters, and my own experience of it during the past nineteen years is limited to this and nine previous occurrences. These, with one exception—a female on the Wilstone Reservoir on October 27th, 1907—were between November and March, and a visit so early as mid-September is noteworthy.

CHAS. OLDHAM.

MALE BLACK STORK INCUBATING EGGS.

IN the *Practical Handbook* the Rev. F. C. R. Jourdain, under the heading of "Breeding Habits," states that more evidence

is desirable regarding the part taken by the male Black Stork (*Ciconia nigra*) during the process of egg incubation.

It may therefore be of interest to record that on May 25th, 1926, when in the Banat of Roumania (ex Hungary), I was the unwilling spectator of the death of a very close sitting Black Stork, shot by a Roumanian naturalist as it flew off its nest containing three incubated eggs.

This bird, on dissection, proved to be the male and, if my memory is not at fault, it had a pronounced incubation patch.

W. M. CONGREVE.

[Recent observations have also shown that the incubation-period was greatly under estimated by Naumann (28 days) and is probably about 40 days, rough observations by Hörring and others ranging from 32 to 43 days.—F.C.R.J.]

BLACK REDSTART IN SURREY.—Mr. W. M. Crook informs us that he saw a Black Redstart (*Phænicurus ochrurus gibraltariensis*) near Coldharbour, on October 24th, 1926.

WHITE WILD GEESE.—Referring to the note on this subject (*antea*, p. 132), Baron Snouckaert van Schauburg informs us that a female Grey Lag-Goose (*Anser anser*), shot on October 19th, 1897, near Hallum on the coast of the Dutch province Friesland, was partially albinistic (not quite white). Baron Snouckaert had it mounted and kept it for some time in his collection and subsequently sold the specimen to the Carnegie Museum at Pittsburg, U.S.A. This specimen is additional to those mentioned by Mr. Gladstone in his paper.

HEN-HARRIER IN YORKSHIRE.—Mr. W. S. Medlicott informs us that he saw an adult male *Circus cyaneus* near Little Beck, Sleights, on November 4th, 1926.

SPOTTED CRAKE IN YORKSHIRE.—Mr. W. S. Medlicott writes that an adult *Porzana porzana* was shot near Northallerton on October 21st, 1926.



LETTERS



NESTING OF THE MARSH-WARBLER.

To the Editors of BRITISH BIRDS.

SIRS,—In the October issue (*antea*, p. 112), Major W. M. Congreve gives some interesting sites for the nests of the Marsh-Warbler (*Acrocephalus palustris*) in certain districts abroad where this species was plentiful.

My experience in a county where this species is decidedly rare will prove that it does not necessarily follow that these surprising situations are always compatible with an abundance of birds. The position of a nest and eggs I saw in June, 1925, will add another site to the list; it was built close to the trunk of a very old and large withey tree, suspended in the "brash" or young stems, which shot out low down in the trunk and were about two feet in length. In the same county a few years ago a nest containing a full set of eggs was found in growing corn on a hill-top far from water, a site very similar to that mentioned by Major Congreve in France. The Marsh-Warbler loves the witheys, and when nesting in dense two or three year old beds, the underlying vegetation being somewhat scanty for want of light and sun, they resort to the edges of the beds where meadow-sweet, comfrey, chervil, etc., etc., flourish and sufficient cover is available. STANLEY LEWIS.
September 15th, 1926.

LONGEVITY OF SWALLOW.

To the Editors of BRITISH BIRDS.

SIRS,—A few days before Mr. Witherby's article, *The Duration of Life in Birds* (*antea*, p. 71), was published, I was explaining to a friend some of the advantages of bird ringing, among other things, that it would teach us something about this subject. He told me that Miss B. Dowson marked a Swallow (*Hirundo r. rustica*) with a "Canary ring" at West Meon, Hants, some time before the war. It was ringed as an adult, and returned to the same nesting place for nine consecutive years, after which the pair stopped nesting there. NORMAN H. JOY.
78, CRESCENT RD., READING.

BIRD'S-NESTING BANK VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. B. W. Tucker's interesting letter (*antea*, p. 158) on Bird's-nesting Bank Voles, quite convinces me that he has hit upon the most probable solution of the problem that baffled the Rev. F. C. R. Jourdain, himself, and the writer, when they were at Hammerfest in 1921. What chiefly convinces me is the result of my experiences on the borders of Transylvania, last spring. Time and again I found complete or partly built nests of the Collared Flycatcher (*Muscicapa albicollis*)—usually well down holes in hornbeam trees—thoroughly disarranged. In some cases where nests contained eggs, some were sucked and left on the nest edges or on the ground at the foot of the nest-containing tree. I say "some" of the eggs because in every case in which a disturbed nest contained eggs there were several survivors—usually hidden away in the nest lining.

It did not take me long to discover the culprits and these were found to be dormice, not bank voles. I actually caught them on several

occasions and gave several to a small boy of my acquaintance, to be kept as pets.

It was interesting to see the extreme agitation of the Flycatchers when their nests were upset. The male bird would repeatedly drive the hen to the nest hole, but as repeatedly she would peer in and quickly leave again. I had reasonable proofs of several nests which had been disturbed and one or more eggs sucked, but which, nevertheless, were not deserted by the birds.

The only nest of the Red-breasted Flycatcher (*M. p. parva*) which I succeeded in finding *completely* disappeared with at least three eggs.

Here I keep an open mind, because in the case of all the Collared Flycatchers the nests were *not* removed—merely thoroughly rumbled up.

In at least two cases, two dormice were discovered in the same nest and I presume they intended to use it as a home. It appeared to me that egg sucking was only incidental and not by any means a main object.

W. M. CONGREVE.

GREY PHALAROPE IN CHESHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—On November 7th, 1926, I picked up a specimen of the Grey Phalarope on the shore at Hoylake, Cheshire, "a couple of miles" from the lake at West Kirby, where Mr. Wilson made his observation recorded in the November number (page 157). J. W. W. STEPHENS.

EARLY BIRD-MARKING RECORDS.

To the Editors of BRITISH BIRDS.

SIRS,—On page 158 of this volume, Dr. H. J. Moon quotes from Bewick the case of a Woodcock marked in Dorset in 1797 and afterwards recovered at the same place. In an editorial note is added a record, from *The Essex Chronicle* of 1776, of a Swan bearing a medal indicating Danish origin. It may therefore be of interest to quote other old records, some of them of still earlier date. Doubtless the information which I can give by no means exhausts the subject.

Although Noah is recorded as having made homing experiments with a Dove, and less successfully with a Raven (*Genesis*, viii, 7-12), the earliest case of actual marking which I can cite is that given by Pliny in the tenth book of his *Natural History*. A Roman knight used to take some Swallows with him from Volaterrae in Tuscany to Rome, and to let them loose, for the information of his friends at home, after dyeing them with the colours of the winner of the chariot races.

The use of homing Pigeons is of great antiquity. There must also have been many early instances of marked captive birds, particularly those used in falconry, escaping and being recovered at a distance. One such is that of a Falcon belonging to Henry II., which escaped from Fontainebleau and was recovered at Malta, so it is said, twenty-four hours later. The story is given in various books, but I do not know its original source; presumably it refers to the French king of the name (1519-59).

The case of the Swan in Essex is antedated by that of a Duck recorded by Gilbert White (letter to Daines Barrington, 12th February, 1771). This bird was shot in Sussex in the winter of 1708-9, and bore a silver collar engraved with the arms of the King of Denmark. One of White's editors, Harting, suggests that the bird may have been a Cormorant used in fishing. White himself adds "I have read a like anecdote of a Swan."

There is at least one case earlier than that quoted by Dr. Moon in which marking of wild birds was done in a spirit of more or less scientific inquiry. Lucanus (1922 : *Die Rätsel des Vogelzuges*) quotes a work by Johann Leonhard Frisch, published in 1740, in which the author records having tied coloured threads to the feet of Swallows. The birds returned next year, and as the dye was not washed out Frisch concluded that they had not hibernated under water !

Marking for purposes of migration study had been suggested even earlier than this. Schenk (1924 : *Aquila*, 30-31, 325) and Quantz (1925 : *Ornithologische Monatsberichte*, 33, 14) quote a publication, dated 1722, in which it is recorded that one Gottlieb Koehlich, a pastor in east Prussia, had proposed marking White Storks, apparently old birds to be caught on the nest ; but this came to nothing.

It must have been very soon after the close of the eighteenth century that J. F. Naumann began the experiment, recorded in his work of 1822, to which attention has recently been drawn by the editor of the *Ornithologische Monatsberichte* (*loc. cit.*). Naumann released a number of Buzzards after marking them with copper rings upon which the complete data were inscribed. The account is in general terms only, but apparently a good many birds were marked over a period of years and a few were subsequently reported. The object was the study, not of migration, but of plumage changes, and for this no material was obtained.

In the nineteenth century, records of isolated marking experiments become fairly numerous. Lucanus mentions several German instances, referring especially to White Storks. Lühe (1908 : *Ornithologische Monatsberichte*, 16, 96) had already drawn attention to one interesting case, given by Homeyer (1881 : *Die Wanderungen der Vögel*), in which a Stork was marked in south-western Germany in July, 1880, and recovered in Spain a month later. This is in accord with recent experience.

Schenk (1921 : *Aquila*, 28, 152) mentions three early records of marked Storks which are supposed to have travelled from Europe to India, a movement not confirmed by twentieth century marking. In the two cases of which he is able to give details, the earlier dating from 1813, the birds are themselves alleged to have brought back with them the news of their winter capture.

Search would probably bring to light many early marking records in this country also. One, for instance, is quoted by Yarrell (1845 : *A History of British Birds*, 2nd ed., Vol. I., p. ix.) from the daily press of the year in which he wrote. It refers to a Swallow shot in Yorkshire which bore, tied to one leg, a piece of parchment inscribed " J. Rovina y Clavi. Barcelona, 10th March, 1845."

There is an antique, romantic flavour about this final record, quoted in various works from Slatin Pasha's *Five and Sword in the Sudan* (1896). A young Crane liberated in south Russia by Falz-Fein, who has since used modern rings, was provided with a species of locket round its neck in which was placed a paper giving the bird's history in several languages. This was found soon afterwards near Dongola by a follower of the Mahdi, and was sent to Slatin, in his captivity at Omdurman, by the Khalifa. This, however, was in 1892, two years after Lord William Percy had begun the regular marking of Woodcock in Northumberland, and only seven years before Mortensen, in Denmark, inaugurated marking on a large scale with numbered rings.

A. LANDSBOROUGH THOMSON.

LONDON, 12th November, 1926.



REVIEWS



The Gulls (Laridæ) of the World; their plumages, moults, variations relationships and distribution. By Jonathan Dwight, M.D. Illustrated. (New York: Bulletin of the American Museum of Natural History, Vol. LII., Art. III., pp. 63-401).

This important work, upon which Dr. Dwight has been engaged for many years, will be warmly welcomed by ornithologists all over the world. In his introductory pages, Dr. Dwight discusses taxonomy and nomenclature, gives a list of all the genera proposed and the classification he adopts with definitions of the genera and subgenera, and a complete synonymy of the species. As a pioneer student of moults and sequence of plumages, the author, as we should expect, gives a very complete account of the various plumages and moults, not only in detail under each species, but also, treats of the subject in a broader and comparative manner, arranged under various convenient headings, in the introduction.

Comparing Dr. Dwight's accounts of the plumages and moults of the British Gulls with ours in the *Practical Handbook*, we can find no serious difference except in the spring moult of Sabine's Gull, which we found to extend to the wings and tail (unlike all other Gulls); but this is founded on small material, though April birds moulting wings and tail were examined by us.

Dr. Dwight's generic groups are, we are glad to see, large, but he divides the Hooded Gulls under the genus name *Hydrocolæus*, which seems scarcely warranted, especially as he is evidently doubtful as to where to place *ichthyaëtus*, which he keeps somewhat reluctantly under *Larus*, and *melanocephalus* which he places with equal doubt under *Hydrocolæus*.

For the Ivory-Gull he accepts the specific name *albus*, which we rejected as doubtful, and for the Iceland Gull he uses *leucopterus* of Vieillot, 1820, but according to Mathews and Iredale (*Austr. Avian Rec.*, IV., p. 156) this name refers to the Glaucous Gull. The Common Gull has for many years been accepted as having occurred once in North America (Labrador), but Dr. Dwight on examining the specimen finds that it is an example in worn juvenile plumage of *L. delawarensis* and not *L. canus* at all.

The Herring and Lesser Black-backed Gulls are undoubtedly the most difficult taxonomically and agreement regarding their relationships has not yet been reached. Dr. Dwight considers *Larus cachinnans* as a distinct species. On account chiefly of its yellow legs he will not unite it specifically with *argentatus*, although *regæ* is said to have sometimes legs of a yellowish-flesh. Nor does he recognize the western Mediterranean form of this bird, *michahellesii*, though he admits that it approaches his *atlantis*, which he considers a form of *Larus fuscus* and we a form of *argentatus*. Nor does he admit *Larus fuscus intermedius*, which Mr. Schiöler has proposed for the Norwegian, as opposed to the Swedish, Lesser Black-backed Gull. As regards the North American Herring-Gulls, Dr. Dwight distinguishes *smithsonianus* for the more southern breeding bird and *thayeri* for the more northern. *Larus kumlienii* he thinks is a hybrid between the Herring-Gull (*thayeri*) and the Iceland Gull.

Before closing our notice of this valuable and interesting work we must refer to the plates, which are of great importance. These consist of sixty-four black and white plates containing four figures on each and showing the five outer primaries and half the tail, not only of adults but in many cases of immature birds. These with five coloured plates of bills and feet will prove of the greatest assistance in identifying species and fixing the age of specimens.

Dr. Dwight is much to be congratulated on having accomplished a sound and useful piece of work for which the student of Gulls will always be grateful.—H.F.W.

De Vögels van Nederland. Door Prof. Dr. E. D. van Oort ('s Gravenage: Martinus Nijhoff).

THE second volume of Dr. van Oort's large and important work on the birds of Holland is now complete, while the plates of Vol. III. have also been issued. Vol. II. covers the Hawks, Game-birds, Rails and Bustards, as well as the Plovers and a number of other waders. We note that Dr. van Oort places the Dutch form of Goshawk as *A. gentilis gallinorum*. In this middle-European form the underparts of young birds are more rusty-yellow below than in Scandinavian birds, which are whiter. In size the bird is also rather smaller. This form has only comparatively recently been considered distinct and it is quite possible that some of the British recorded examples have belonged to it, though this cannot be determined without examination of specimens. Differences in the avifauna of Holland and the British Isles are somewhat marked in the birds covered in this volume. A certain number of species such as the Pallid Harrier (*Circus macrourus*), the Serpent Eagle (*Circaëtus gallicus*), the Buzzard (*Buteo ferox*), the Barbary Falcon (*Falco peregrinus peregrinoides*), and others admitted to the Dutch list as stragglers by Dr. van Oort are absent from ours. On the other hand, a good many stragglers or rare visitors on our list such as the American *Falco peregrinus anatum* and *Accipiter gentilis atricapillus*, and the Lesser Kestrel (*Falco n. naumanni*), are not included in the Dutch list. In breeding-birds the three Harriers are more plentiful in Holland, and the Goshawk and Honey-Buzzard breed, as do the Spotted, Little and Baillon's Crakes, but the Golden Eagle, Peregrine and Merlin are only visitors, while the Capercaillie, Red Grouse and Ptarmigan are altogether absent.

The plates in this volume, if not very artistic, are certainly very useful. The birds are represented in a very large size (even the Griffon Vulture is one-third, and most of the Hawks, larger than half natural size), and a good many figures of each species are given showing various plumages. There are six figures for instance of Montagu's Harrier, five of the Sparrow-Hawk, and no less than nine of the Common Buzzard. The plates of Hawks are perhaps the best, the colouring in those of the waders being not so good, the birds often being too dark and dull, and the drawings of the chicks in down of these birds are especially disappointing.—H.F.W.

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NOTES ON ALBERTA WADERS INCLUDED IN THE BRITISH LIST.

BY

WILLIAM ROWAN, M.Sc., F.Z.S., M.B.C.U.

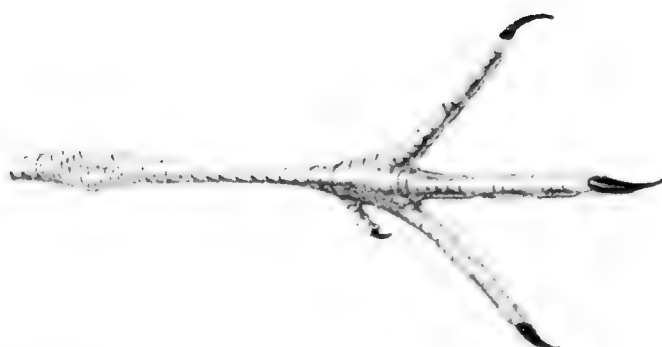
PART V.

Tryngites subruficollis, BUFF-BREASTED SANDPIPER.
(Plate 7.)

THIS is a remarkable Sandpiper from many view-points. Like the American Golden Plover and the Eskimo Curlew it used to exist in millions and was slaughtered in uncountable numbers. To-day there are many widely travelled collectors who have never in their lives met with it. After extensive enquiries I can discover only one spot on the continent besides our Point on which migrating Buff-breasted Sandpipers may be relied upon to turn up in any numbers. We get it in hundreds every spring and, roughly speaking, it frequents only one field. Odd birds or moving flocks may be noted elsewhere from time to time, but on the rough pasture that forms the main body of the Point this species arrives with unfailing regularity within a day or two of the 18th of May. Like the Golden Plover it seems to migrate by night, for at daybreak there may be hundreds in place of the few or none at all of the previous evening. We have therefore been exceptionally fortunate in being able to get observations on the habits of this Sandpiper on its spring migration. In the fall—late August and September—it is far less abundant and we have taken only juveniles and seldom seen them in flocks. On August 3rd, 1925, in paying a flying visit to the Point, I noted five Buff-breasts together. They looked to me like adults but I was unable to secure one. It is therefore probable that the adults come through the Province, but, as is customary with waders, ahead of the young.

The species is now so scarce that it is impossible to compute its migration routes from recent records, but its nocturnal arrival at, and departure from, the Point in large batches, together with the very few records of its occurrence elsewhere and its ever excessive fatness, suggest that it covers long stages at a time.

The Buff-breasted Sandpiper, like Bartram's, is a Plover in its ways and habits rather than a Sandpiper. Even in its coloration it differs radically from the Common Sandpipers. It is extraordinarily tame and confiding at times. When the

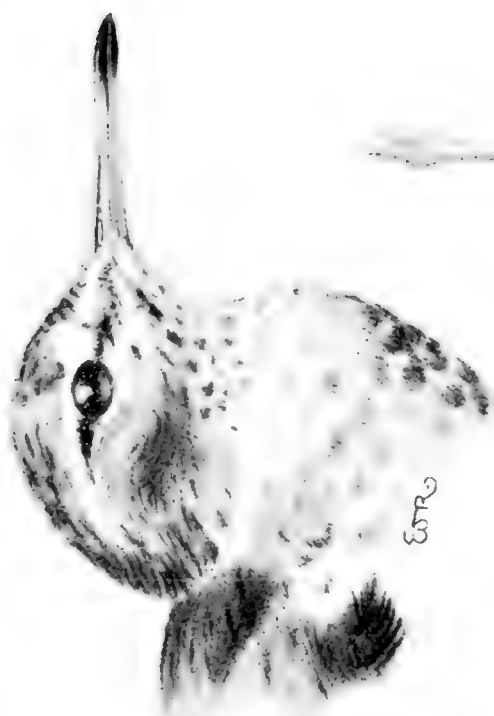


BUFF-BREASTED SANDPIPER.

Adult male, May.

Nat. size.

Copyright by W. Rowan.



SPOTTED SANDPIPER.

Adult, May.



mood seizes it, one could without difficulty wipe out every bird of a flock provided one killed or wounded one with the first shot. The remainder will return again and again to a wounded bird. The noise of the gun seems to have little more than momentary effect.

Owing to the muddy tone of their plumage these birds are exceptionally difficult to see on the type of ground that they so habitually frequent. One can easily walk into a flock without knowing it till the birds get up almost under foot. This is made the easier by their habit of "freezing." They stand immobile on being approached, not necessarily crouching, generally the very reverse, but without movement they readily enough escape observation. If they start moving as one gets nearer, it is always on the run. They then carry their necks "craned," scatter widely, and zig-zag hither and thither rather after the manner of Partridges, of which they frequently remind one.

A flock will seldom rise in unison, but the nearer birds will merely fly over and settle on the remote side of the further ones. Even when Buff-breasts are amongst Sandpipers such as Baird's, Semi-palmateds, etc., five times out of ten they will remain on the spot if the others are scared up. A really large flock is rare. We estimated the number of Buff-breasts on a few acres of grass one morning at about 2,000 and we spent several hours in trying to photograph them. They were scattered in clumps in all directions. Although we walked through them from one end to the other more than once, thus tending to herd them, the largest number we were able to put up together was about 150 (Fig. 14). This constitutes the largest flock we have ever seen. The typical loose association is evident in the photograph. The birds merely flew round and settled again in the vicinity.

On windy days, these, like other waders, become exceedingly restless and impossible to approach. They then perform the most remarkable gyrations, always but a few feet above the ground, and seldom rising and falling vertically as do so many others. They attain great speed and keep in close formation, moving in absolute unison. As such a flock turns in the sunlight there can be no possible error as to identity, for the whole mass looks yellowish. A single bird, in favourable light, may also give one the impression of being yellow. The absence of white margins and black centre to the rump, and hence the lack of contrast in this region, I have found to be the most useful diagnostic character in the field. The wing patch (see Pt. IV.) is also valuable. The extraordinarily



FIG. 14.—BUFF-BREASTED SANDPIPER. A FLOCK AWING.
(Photographed by W. Rowan.)

rounded head seen in silhouette against the sun or in bad light at reasonable range has more than once proved useful. The note is always diagnostic :

 ∪ ∪
“ tik tik.”

I know no other bird that can become so disgustingly fat as the Buff-breast. Holes made by shot pellets that do not penetrate sufficiently to draw blood, ooze oil, which runs over the feathers and makes the bird so messy that it has to be cleaned after skinning. In addition to this it bleeds very freely. I should say that on the average only about one bird out of every five shot can be made up without the necessity of extensive cleaning.

There is one feature of the Buff-breasts on the Point that merits mention—the marked preponderance of males over females. As with the Pectoral, there is a great disparity in size between the sexes, the males being by far the larger. They can therefore be distinguished in life. Since the sexes travel together the comparison is a fair one. The birds secured by myself and various collectors on visit, all taken more or less at random over a period of four years, have worked out at about five males to two females. It is possible that this fact accounts for the slow rate of recovery of the species. But we have noted a constant excess of males also amongst Grey Plovers and to a lesser extent amongst Golden, while the excess of males in breeding Bartram's in the south of the Province has already been commented upon.

I am indebted to the Biological Survey at Washington for kindly analyzing the contents of seventeen stomachs, spring taken. Roughly 40 per cent. consisted of *Coleoptera*, adults and larvæ, and 50 per cent. of *Diptera*, chiefly larvæ and pupæ. Seeds of *Polygonum*, *Potamogeton* and *Eleocharis* were present to the extent of 1 per cent. The rest consisted of spider and insect remains. I shall be glad to send a detailed list to anyone who may be interested.

There only remains to give an account of the display of the Buff-breasted Sandpiper. Nelson, in his *Report upon Natural History Collections made in Alaska* (Washington, 1887), has described Murdoch's observations obtained on the nesting-grounds. These are not detailed, but in the account he refers to two birds sparring and then rising in the air to about thirty feet before drifting apart. This episode we have not witnessed, nor anything comparable with it.

As we have noted it annually, there are several distinct stages to the display, but the males do not appear to be concerned in the least with the females at any time. Nor have I ever seen a female take the slightest notice of any of the displays. Nelson comments on the fact that Murdoch frequently saw *solitary* males displaying, yet he was observing them on the actual breeding-grounds.

Probably the most frequent performance is the raising of one wing only (either one), but this has various phases. *A*, the wing is spread and held steadily for a few moments with the primaries horizontal (Fig. 15, *A*) and is then closed again. *B*, the wing is spread with the primaries nearly perpendicular and waved round in an ellipse, the bird standing still. *C*, the wing is spread while the bird runs round in circles. *D*, the wing is held aloft while the owner runs after another bird, always, so far as I have seen, another male, which instantly raises one wing also and starts zig-zagging through the grass, the first bird giving chase. They may thus cover many yards before one suddenly collapses his wing and halts, the second immediately following suit. All these single-wing performances seem to be carried out in silence.

Both wings together are used for another set of actions. *E*, the wings are raised similarly to a bird alighting on or arising from the ground, the body horizontal. In this attitude one bird sometimes chases another. *F* is a double version of *B*, both wings being raised high and waved round and round (Fig. 15, *F*). *G*, both wings are spread, under-surfaces forward, primaries horizontal, after the manner of the American Eagle, the body being almost perpendicular (Fig. 15, *G1* and *G2*). This may be accompanied by a rapid

∪ ∪ ∪

“ tick tick tick ”

many times repeated. Two birds may do it simultaneously standing opposite to each other with the tips of the wings practically touching. *H* is the most characteristic of all and the most amusing to watch. Both wings are raised with the under-surfaces facing to the front as in *G* but with the primaries perpendicular, tips practically touching each other over the bird's head (Fig. 15, *H*.) The body is held absolutely vertical and the legs stretched to capacity (I am not sure that the birds do not stand partially on tip-toe), tail cocked out horizontally behind, while the individual “ ticks ” at top speed for about a second. Each “ tick ” is accompanied with a rapid jerk of the whole body. The bird then relaxes

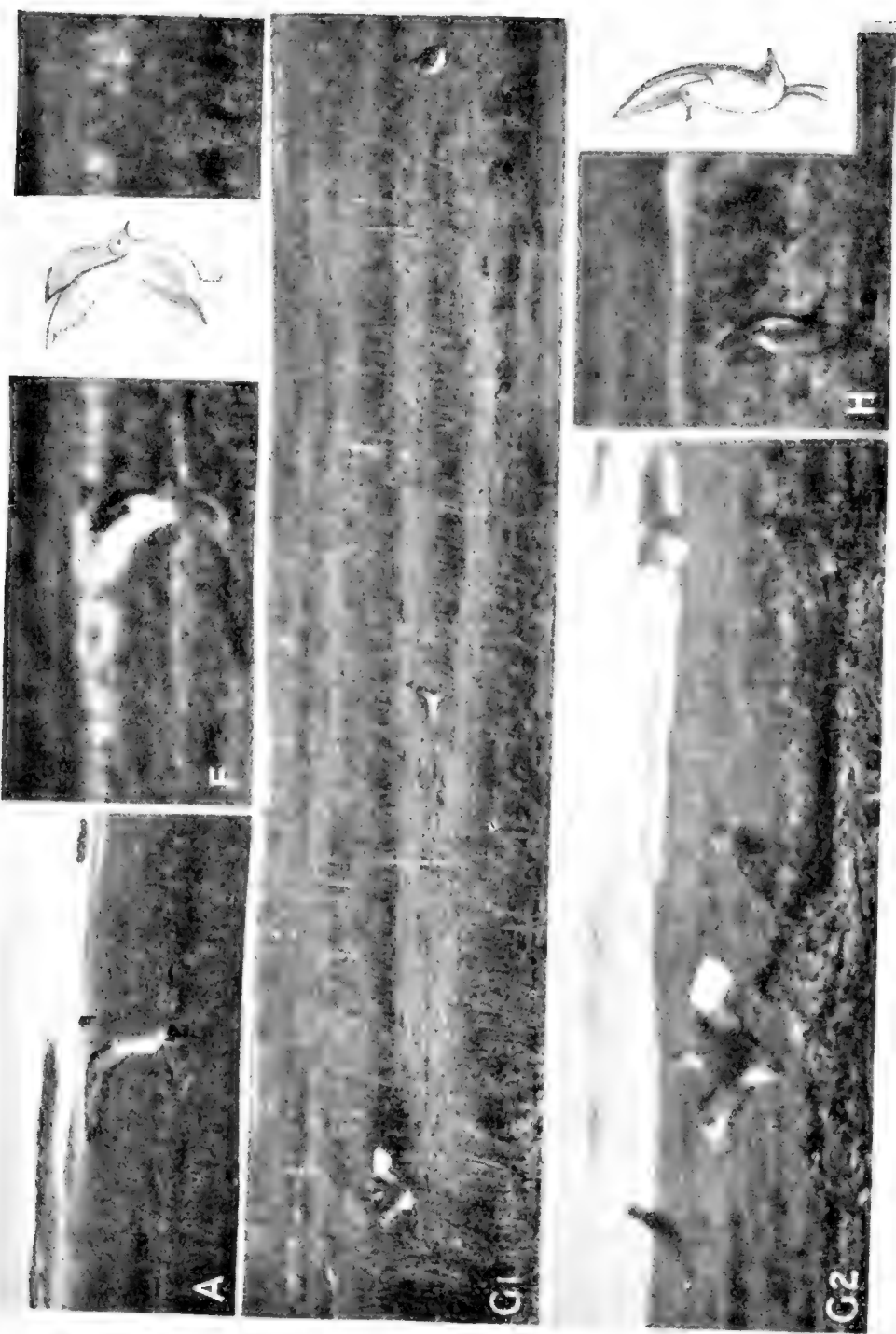


FIG. 15.—PHASES IN DISPLAY OF BUFF-BREADED SANDPIPER.
(Photographed by W. Rowan.)

momentarily, turns through an angle of 40 to 50 degrees, repeats the performance to a fresh audience (if there is one, for I have seen isolated birds doing this), relaxes to switch round again, and so on perhaps half a dozen times. This may also be done simultaneously by two birds, face to face and standing so close that the wing tips appear to touch over their heads. It may then be repeated without any change of direction in the intervals. But it always seems to be done in spasms. Display is evidently infectious, particularly in fine weather, for no sooner does one start than a dozen may be at it in a moment. But it is curious to see a bird suddenly stop in its hunt for food in order to go through one of these acts and then proceed as though it never had anything else in mind, particularly if it is by itself. It seems so irrational. Occasional bickering occurs, but we have never seen serious fights or even suggestion of anything serious.

There are probably few birds that use the spread wing so consistently in display, but there is surely no other bird with a wing so incomparably beautiful as that of the Buff-breasted Sandpiper.

My photographs have suffered from poor light and from the difficulty of focussing fast and accurately with a 4.5 lens on a mud-coloured object sitting on mud. The reproductions herewith are of course from enlargements, in which the fuzziness is increased.

THE COURTSHIP OF THE COMMON SCOTER.

BY
DONALD GUNN.

At the approach of the breeding-season it is the habit of most of the ducks to form little parties for the purpose of courtship display. In all cases these are composed of a group of males surrounding a single female and going through a series of postures which, however grotesque to our eyes, are obviously enjoyed by the performers and presumably appreciated by the admiring female. But, while all such displays have certain features in common, the rules of conduct followed by the drakes, as well as the vigour of their antics, are seen to vary greatly when one species is compared with another.

Some ducks, such as the Tufted, are so undemonstrative as to seem almost cold-blooded, the drakes doing little more than convoy the duck in a loose squadron formation with their heads stiffly elevated.

Others, like the Mallard, appear to find so much pleasure in their formal and leisurely "showing off" that at times they are liable to drift away from the duck, as though to enjoy the rigour of the game apart from the distracting influence of the prize.

The Common Scoter (*Oidemia n. nigra*), on the other hand, possibly as a result of his seafaring life, is so hearty in his courting methods that they may almost be described as boisterous. Of this duck, J. G. Millais, in his *British Diving Ducks* (Vol. II., p. 61) says, "I do not know of any account of, nor have I seen, the courtship of this duck." The following notes, made in the spring of this year while watching a group of Common Scoters on the Kentish coast, may therefore be worth offering to readers of *British Birds*.

April 9th, 1926.—Except that it is broken by occasional ten-minute pauses for rest and titillation, the performance is continuous while my vigil lasts. Suitors fall out now and then during its progress, but their places are soon filled by passers-by who drop in and take a hand. At any given moment there are usually seven drakes surrounding the single duck. At first inspection, if the sea is at all rough, it is easy to overlook the female bird, for she is brown in colour and sits low on the water, while the males are conspicuously black and are, in every sense, making the most of themselves.

The direction of movement of the whole party is never constant for long, but its general trend, while I watch, is towards the west and parallel to the shore line. Whether

this results from an intention on the part of the duck to move that way, or whether it is effected by the set of the tide, I am unable to determine ; but, in any case, as she is the nucleus of the group its digressions will conform to her movements, be they voluntary or otherwise.

She swims with the van of her escort around her and the remainder tailing out behind. She often makes low swift rushes which may be intended to simulate acts of repulsion or attempts at escape, but are in either case mere feints. There is one handsome drake, bigger and blacker than his comrades, and it seems to me that she keeps with and even follows him, reserving her half-hearted attacks and furtive dabs for the rest of her suite. At times she rises and flies away, when all the company follows ; but her flight lasts only a short distance before she plumps down and is once more the centre of the turmoil which gives her so distracting a sense of her importance. She pretends to be embarrassed, turns this way and that, swims low, is self-effacing and modest—in a word, the complete feminine.

The demonstrations of the individual drakes are such as to carry them past her one by one, and presently she finds herself, as a result of this movement, at the tail of the group instead of leading it. Pretending to accept this as a chance of escape, she turns about and swims away, as though saying " I've had enough of this rowdy gang." Then they all turn about and go after her and she is caught up and once more penned in. She then usually turns again and so resumes the original line of travel.

The drakes go through many of the motions that are common to all ducks when displaying ; more particularly frequent upstandings and head shakings. There are also attitudes that are assumed by the whole party on occasion, or at any rate there is one such, when the whole company of drakes elevate their necks to the fullest extent (keeping the head horizontal) and maintain that position for some time—just as the Tufted drakes do when displaying. While making this concerted, though rather tame demonstration, there is a chorus consisting of a constantly repeated metallic note which to my dull ear sounds like "Crek." As I hear this only in squalls, and as these seem to coincide with the general erect-neck posture, I take it to be a sort of day-light serenade.

While doing this the drakes all carry their stiff tails at the proper Scoter angle of 30° to the horizontal, which makes this bird always so easy to identify. But they can make more play with the tail than that, for every now and then a drake

will fan out his tail and suddenly raise it over his back at a seemingly impossible angle ; though, when he does this, I cannot detect any elevation of the stern and hollowing of the back, such as is shown by the displaying Mallard.



Among the most spectacular forms of display by the drakes are the rushes. These may be divided into three classes : (1) Low rushes. (2) High rushes. (3) Flight rushes.

In the low rush, which is the swiftest, the neck is extended and kept very low.



THE LOW RUSH.

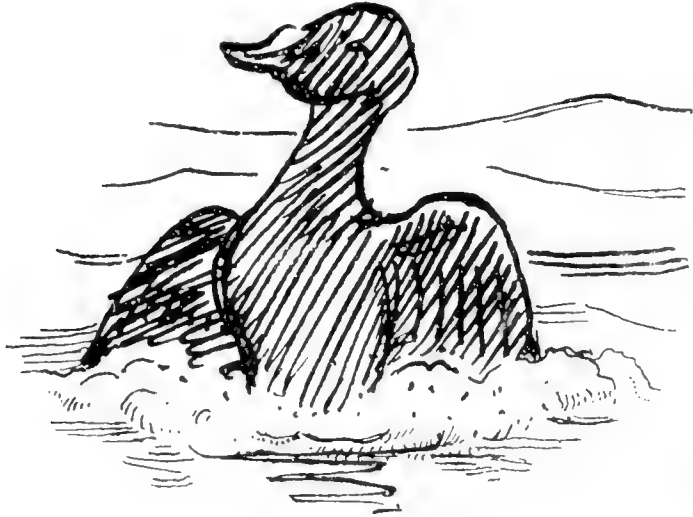
In the high rush, which is much slower, the bird foams past the duck in a half-upright position with his breast protruded.



THE HIGH RUSH.

The flight rush, as I have called it, is perhaps the most conspicuous and is in almost constant use by one or other member of the party. Every few moments one of the drakes

at the rear of the group rises and flies a few yards ahead of the procession—perhaps eight or ten wing-beats—and then alights on the water in front of the duck in a nearly upright position with his wings depressed and half extended: thus creating a great seething splash which the momentum of his flight allows him to carry with him for a distance of several feet after striking the surface. This is in full view of the duck. He then turns back towards her and, assuming a very “chesty” attitude, swims back to join the group.

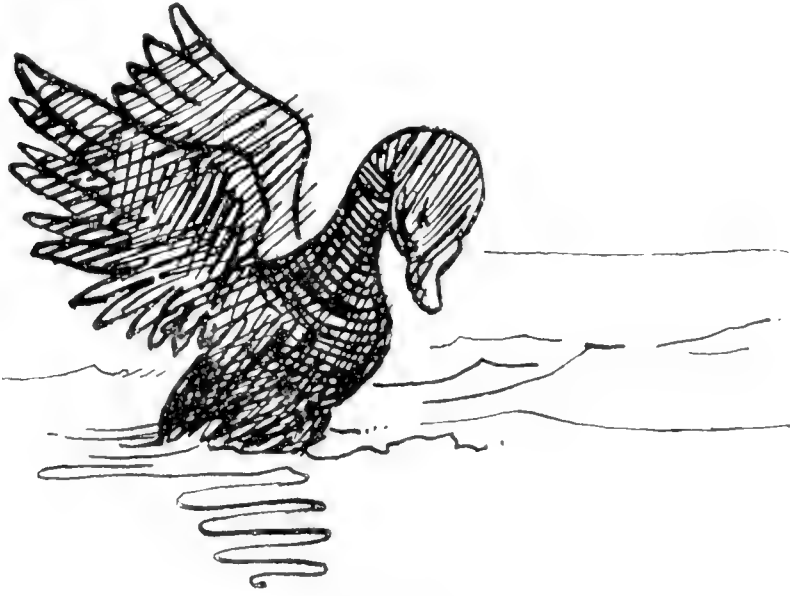


THE FLIGHT RUSH.

As often as not, two drakes will make a flight rush in this manner and make it almost simultaneously, giving the impression of an attempted attack and short pursuit by one of the two. But I think it happens thus, as a paired display, simply because the starting up of one drake serves to pull the action-trigger for another. And it will be noticed that, though the one who appears to be the assailant comes back after the short flight, very erect and seemingly triumphant, the pseudo-fugitive follows him just as erect and just as triumphant. And such chasing as there is is merely formal, for the drakes are not really combative and never attempt to come to grips.

But of all the various forms of display the most effective and curious is performed as follows. A drake pauses, opens his wings deliberately and fully while he remains sitting on the water, elevates them high over his back and then lifts himself nearly upright by about half a dozen strokes of his raised wings. While in that position, the bill is pointed

vertically downwards and the head passed down in front of the breast.



THE OBEISANCE

The duck also displays ; I saw her do a good deal of head-shaking, as well as this elaborate form of head-bowing.

Altogether, for the more constant of her admirers, the turmoil of their courtship must be highly fatiguing. Every now and then by common consent there is an interval for rest and revivment—which latter takes the form of furious nibbling and scratching. Then, with one mind, they fall to again.

NOTES

BIRD'S-NESTING MICE AND INSECTS.

As field-mice are just now approaching one of their periodic *maxima* it is to be hoped that the recent correspondence in *British Birds* will lead to the publication of further observations. I have recorded (*Ibis*, Oct. 1926, pp. 644 and 651) instances of the finding of nests of Willow-Warbler (*Phylloscopus t. trochilus*), Spotted Flycatcher (*Muscicapa s. striata*), and Pied Wagtails (*Motacilla a. yarrellii*) in Hampshire, with teeth-marks in the egg-shells which could only have been made by a mouse of some sort, though I have not had Mr. Tickner's luck in seeing the marauder at work (see *antea*, p. 159). Probably the bank-vole (*Evotomys glareolus*: tail= $\frac{1}{2}$ body) is concerned; but it is possibly the long-tailed field-mouse (*Apodemus sylvaticus*), which is also common here. The short-tailed field-mouse or common vole (*Microtus agrestis*: tail= $\frac{1}{3}$ body) seems to be a non-climbing species and is probably innocent. I have also found nests of a Chaffinch (*Fringilla c. cœlebs*), and a Linnet (*Carduelis c. cannabina*), in which I had expected to find eggs, empty and with the linings disarranged as described by Major Congreve; as this work was quite different from the former cases I can well believe it due to the dormouse (*Muscardinus avellanarius*). In all these cases the attacks had been made before incubation had begun, but this year we had a nest of three-quarter fledged Great Tits (*Parus m. newtoni*) killed by some small mammal. The evidence was conclusive that the culprit was not any bird, nor a stoat, and made it very improbable that it was a weasel; in this case also I suspect the dormouse, which had formerly nested in this box. Grass-snakes have twice been caught here taking young Willow-Wrens from the nest, but they could not possibly have been involved in this case.

Neither from Messrs. Horace Donisthorpe, O. W. Richards, nor W. H. Thorpe can I get any records of insects preying upon nestlings in Britain, therefore it seems worth while to record the following cases, imperfect though most of them are. In 1924 a low-sited Linnet's nest was under observation and a week after hatching all the young were found dead, covered by a devouring swarm of small dark ants (? *Formica fusca*). Under similar circumstances in 1925 I found a family of nearly fledged Robins (*Erithacus r. melophilus*)

dead in the nest with several large, dark, flat centipedes (? *Lithobius* sp.) feeding on them. Neither of these nests had been drowned out or otherwise interfered with. Desertion at this stage is most unlikely. Supposing one parent had been killed, surely the other would have continued to feed the young through the few remaining days of fledging? Though there is no *proof* of it, I have little doubt that in both cases the young had been killed by these insects. This year I was able to watch big wood-ants (*Formica rufa*) in the act of attacking young Willow-Wrens on their tenth day in the nest. One fledgeling was lying dead about a foot from the nest and another nearer the entrance, cast out, I suppose, by their parents after death; another inside the nest was scuffling and wriggling under the first attacks of a few ants, while many more were on the two carcasses. I freed the afflicted bird as well as I could and placed the dead ones together about a foot away so as to block the trail which the ants had made to the nest; on this bait the ants concentrated and the surviving birds got safely away three days later.

T. G. LONGSTAFF.

MAGPIE AND KESTREL NESTING IN SAME TREE.

WITH reference to Mr. J. F. Thomas's note on a Magpie (*Pica p. pica*) and Kestrel (*Falco t. tinnunculus*) nesting in the same tree, I have known this happen twice in two years. On each occasion I robbed the Magpie's nest, and while the Magpie built again, a pair of Kestrels frequented the deserted nest; subsequently there was a brood of young Magpies and another of Hawks at the same time.

I have never known the species breed as close as seven feet, the nearest I can recall being about fifteen feet. But this is nothing unusual, for it is the exception rather than the rule for Magpies round Cambridge to build within ten yards of the robbed nest, be it in a thorn hedge, a line of trees, or a wood, and I have often known nests of the two species in adjacent trees.

It only proves, however, that the Magpie has no fear of the Kestrel, and, as when eggs are hatched, the Magpies, which formerly were fond of mobbing the Hawks, are now too busy feeding their own young.

G. W. THOMPSON.

[The last paragraph is probably true, so long as there is house room for both, but where nests are scarce I have known a pair of Magpies summarily ejected from a *new* nest by a pair of Kestrels.—F.C.R.J.]

HOUSE-SPARROW IN BAY OF BISCAY.

WHILE crossing the Bay of Biscay, homeward bound, on board R.M.S.P. "Arlanza" on October 17th, 1926, I saw a male House-Sparrow (*Passer d. domesticus*) on the upper deck. We were then about seventy miles S.W. of Ushant. The bird was evidently exhausted, as I was able to approach within a foot or two of it.

C. E. BAKER.

ROCK-PIPIT IN OXFORDSHIRE.

ON October 21st, 1926, while following the towpath down from Godstow to Oxford I flushed a large Pipit, which dropped again a little way ahead. It was very approachable, and when I put it up, which I did quite twenty times, it flew only a few yards on. The timbre of the single shrill note (there were Meadow-Pipits (*Anthus pratensis*) present for comparison), large size, plump build, characteristic rather stolid pose, and definite absence of any trace of white in the tail, were all repeatedly observed at close quarters and put the identification as a Rock-Pipit (that is, either *Anthus s. petrosus* or the Scandinavian *A. s. littoralis*, indistinguishable in winter) absolutely beyond doubt. I had field-glasses and took particular care owing to the *prima facie* suspicion of Water-Pipit (*A. s. spinoletta*). The Rock-Pipit is not given in Warde Fowler's list nor by Jourdain in the new *Natural History of the Oxford District*, so apparently this is the first local record. It always alighted either on the muddy margin, strewn with flotsam, or actually on floating weeds. Later, I picked up a second Rock-Pipit and watched both simultaneously. This was opposite Port Meadow, within the city of Oxford, and perhaps half a mile from the present Berkshire boundary.

E. M. NICHOLSON.

[There is a previous record of a Pipit of the *Anthus spinoletta* group, *i.e.* either a Rock or Alpine (Water) Pipit, seen by Mr. O. V. Aplin on March 22nd, 1903, at Milcombe. He notes that it did not show *pure* white in the tail and suggests that it was the Scandinavian Rock-Pipit (*A. s. littoralis*). This and another record of some race of *A. spinoletta* from Reading sewage farm are treated binomially as *A. spinoletta* in the *Natural History of the Oxford District*.—F.C.R.J.]

CUCKOO REARED BY COMMON WRENS.

ON July 20th, 1926, at Zell, near Biberach, in the Black Forest of Germany, I found a three-parts-grown young Cuckoo (*Cuculus c. canorus*) on the ground under the nest of a Common

Wren (*Troglodytes t. troglodytes*). The Cuckoo was not old enough to have travelled any distance. The nest was placed against the trunk of a twenty-year-old silver fir, being supported at the bottom by a persistent branch, and felted round another dead branch five or six inches higher up. The opening of the nest, though large, was not actually damaged, and the dome was complete. I waited and one of the Wrens returned and fed the Cuckoo.

G. W. THOMPSON.

ROUGH-LEGGED BUZZARDS AND HEN-HARRIER IN DENBIGHSHIRE.

I HAVE recently examined two examples of the Rough-legged Buzzard (*Buteo l. lagopus*) sent in to Shrewsbury for preservation. Both were obtained on the Denbighshire moors near Wrexham—the eastern end of the same moorlands on which the six examples preserved at Rûg, described in my *Vertebrate Fauna of North Wales* (p. 226), were taken. The first was an adult female trapped on November 9th, 1926; the second an adult male—possibly its mate—shot on the 22nd.

Incidentally, I may add that an immature male Hen-Harrier (*Circus cyaneus*) was obtained on the same moor on November 13th.

H. E. FORREST.

INCUBATION OF THE BLACK STORK.

REFERRING to Major Congreve's communication on this subject (*antea*, p. 179), it should be noted that in his interesting monograph "Den sorte Stork" (Viborg, 1920), Mr. P. Skovgaard states, from observation in Denmark (p. 21), "The mates brood alternately."

Regarding the period of incubation, Mr. Skovgaard's remarks may be translated as follows:—"As looking too often at the nest during the earliest period is attended with the greatest risk of driving away the bird, I have in the meantime contented myself with the extremes which my observations hitherto have given. The duration of the incubation-period is about 40 days. The longest, May 4th to June 19th=46 days, and the shortest, May 15th to June 19th=35 days."

P. G. RALFE.

[The duration as given by Hørring (32-38 days) was quoted by Skovgaard in the book mentioned above and is probably more accurate than those here mentioned, as both periods quoted by Mr. Ralfe refer to estimates made on the same nest and should read that in the case of one nest the eggs were laid between May 4th and May 19th (when the nest contained four eggs) while the young were hatched by June 19th, so that the period was something between 35 and 46 days.—F.C.R.J.]

SPOONBILLS IN BEDFORDSHIRE.

THREE Spoonbills (*Platalea leucorodia*) visited the Ouse meadows at Renhold in 1916 and one of the trio was unfortunately shot on March 24th by a local farmer, and one through whom I obtained confirmation of their occurrence. This bird was subsequently purchased in the flesh for seventy-five shillings by the local taxidermist and collector, the late Mr. A. S. Covington, who also advised me of this specimen being in his possession. For obvious reasons of the law I was requested by him to suppress the recording of the same at the time, but now, owing to his death in 1925, I feel I am at liberty to publish this, the first known instance of the species visiting the county.

J. S. ELLIOTT.

CORMORANT IN NORTH DERBYSHIRE.

A CORMORANT (*Phalacrocorax c. carbo*) appeared on the lake in the Buxton Gardens on November 20th, 1926. It was in immature plumage and allowed me to get within five yards of it. The lake is a small piece of water situated among streets and houses. At the time, the weather was misty, glass very low and wind S.W. Cormorants are of rare occurrence in Derbyshire and are generally observed in the south of the county along the Trent valley. As far as I know, it has never been reported from the Peak district.

WILLIAM SHIPTON.

[There are about half a dozen records of Cormorants from Derbyshire, but all are from the Trent or Dove Valleys, and we have no previous records of this species from the High Peak.—F.C.R.J.]

STORM-PETREL IN SHROPSHIRE.

ON November 10th, 1926, a Storm-Petrel (*Hydrobates pelagicus*) was found dead beneath telegraph wires at Donnington, near Newport, Salop. This species is much rarer in Shropshire than Leach's Petrel. It occurs only when storm-driven in winter, as in the present instance; but, as an exception, Beckwith records one caught alive near Wenlock on July 15th, 1886, the weather for some time having been fine and calm.

H. E. FORREST.

OYSTER-CATCHERS INLAND IN CHESHIRE.

OF the common waders the Oyster-Catcher (*Hæmatopus ostralegus*) is by far the least often seen in inland localities in Cheshire and until this year I had only seen it once—at Rostherne Mere, on May 10th, 1914.

During 1926, however, I have twice seen one at Marbury Mere, near Northwich—on June 22nd and December 5th.

There are published three earlier records from the Northwich district—all of single birds :—

December 4th, 1904 (*Fauna of Cheshire*), March 31st, 1916, and March 31st, 1917 (*Lanc. and Ches. Fauna Committee Reports*)—the first two also at Marbury Mere and the third a mile distant.

A. W. BOYD.

GREY PHALAROPE IN CORNWALL.

WHILE fishing off the south coast of Cornwall, near Fowey, in August, 1926, a Grey Phalarope (*Phalaropus fulicarius*) came and swam round the boat. We were about a mile from the land, and a shore breeze was bringing myriads of winged ants seaward. The Phalarope was perfectly tame and was busy feeding on the ants blown on to the surface of the sea.

E. LE BRETON MARTIN.

KITTIWAKE GULL RINGED IN FARNE ISLANDS REPORTED FROM LABRADOR.

A SECOND Kittiwake Gull (*Rissa t. tridactyla*) ringed in the Farne Islands, Northumberland, has been reported from the other side of the Atlantic.

In March last, Mr. George Budgell, officer in charge of the Hudson's Bay Company's Post at Rigolet, on the Hamilton Inlet, Labrador, wrote to inform me that a customer of the Hudson Bay Company had shot a bird in the previous "fall" with a ring stamped Witherby, High Holborn, London, and numbered 70450. I wrote to Mr. Budgell for further particulars and for the return of the ring if he could possibly obtain it. I have now heard from Mr. Budgell in a letter dated October 21st, 1926, as follows :—

"This bird was shot on October 28th, 1925, at Tikkoraluk, Gross Water Bay, Labrador, about fifteen miles distant from the Hudson's Bay Company Post, at Rigolet. The person who shot this bird has moved from Tikkoraluk, and I hardly expect to see him until January. I shall then try to get the ring from him, and shall forward same as soon as possible after receipt."

As a ring with this number was put on a nestling Kittiwake by Mrs. T. E. Hodgkin on June 30th, 1924, at the Farne Islands, I think we can without hesitation accept the record as correct, though the receipt of the ring, if Mr. Budgell is able to obtain it, will be an interesting confirmation.

It is certainly very curious that the previous Kittiwake reported from Newfoundland was ringed by Mr. A. C. Greg in the previous year, also at the Farne Islands (see *Brit. Birds*,

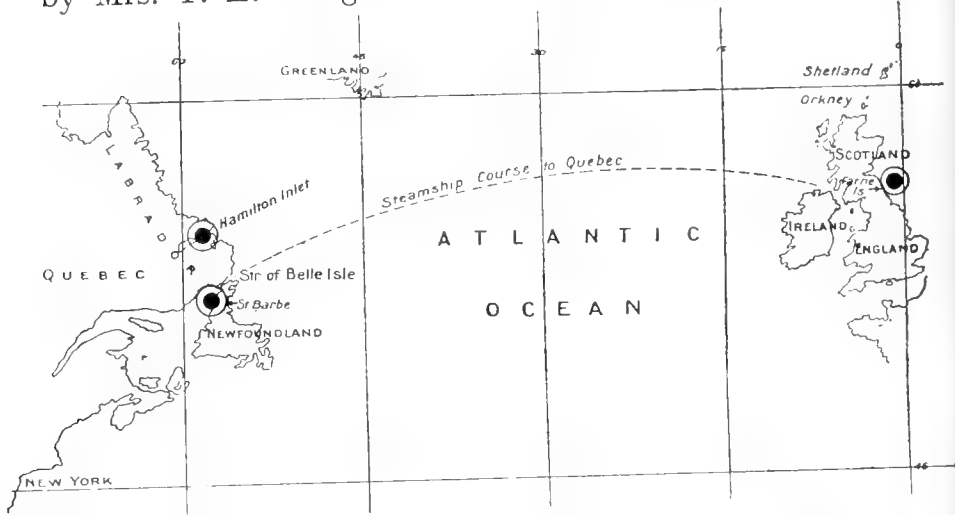
XVIII., p. 262, and XIX., p. 18). The details of the two records are as follows:—

Ringed.

- 67423 Farne Islands, as
nestling, June 28th, 1923,
by Mr. A. C. Greg.
70450 Farne Islands, as
nestling, June 30th, 1924,
by Mrs. T. E. Hodgkin.

Reported.

- Horse Island, St. Barbe,
Newfoundland, Aug. 12th
1924, by Mr. L. Curtis.
Grosswater Bay, Hamilton
Inlet, Labrador, Oct. 28th,
1925, by Mr. G. Budgell.



It would be mere supposition to suggest how or why these birds travelled from our east coast to the Atlantic, or once there why they crossed the ocean to Canada. We know they follow ships often for a very great distance and this may be to some extent an explanation, but that two birds in two different years should have been discovered to have made this remarkable journey points to something more regular than mere chance. The breeding range of our bird is almost circumpolar as it extends eastward from Alaska across Canada to Greenland, Spitsbergen and Novaya Zemlia, while in east Siberia, Bering Sea and Alaska it is replaced by another subspecies *Rissa t. pollicaris*. When, therefore, these Farne Island birds reached the neighbourhood of Newfoundland they would encounter other members of their own race. Whether these birds would ever return or would breed with the Canadian stock and thus make another case of what Dr. Landsborough Thomson has called abmigration, is a question which may yet be decided by ringing.

Meanwhile, we are very grateful to Mr. Budgell for bringing this interesting case to light and for taking so much trouble to obtain the necessary particulars. H. F. WITHERBY.

NORTHERN GUILLEMOT IN SOMERSET.

It is quite usual after September gales to find many dead Guillemots washed up on the coast of Somerset. For several years I have wondered at the difference in the colour of the plumage of the birds picked up, and last year I identified, beyond much doubt, with the help of the *Practical Handbook*, several of them as belonging to the Northern form *Uria a. aalge*. On September 15th, 1926, out of seven so found by F. H. L. Whish and myself, four were undoubtedly *Uria a. aalge*, the black upper-parts contrasting greatly with the mouse-colour of the others; and several subsequently found by myself have been of this Northern form, proving apparently that it occurs more frequently on this coast than *Uria a. albionis*.

STANLEY LEWIS.

WATER-RAILS EATING APPLES.

THE Rev. L. Wynne, Rector of Warnford, Hants, who is a very keen ornithologist, tells me that in his orchard, which is close to a stream and watercress beds, the Water-Rails (*Rallus a. aquaticus*) fly up into his apple trees and peck at apples and, when they fall, finish them on the ground. Jays (*Garrulus g. rufitergum*) are also a pest. Mr. Wynne caught six Water-Rails and released them, but the same birds return and have become tame. They still peck fallen apples.

M. PORTAL.

[The same habit has been recorded of the Moorhen (*Gallinula ch. chloropus*), see *Zool.*, 1866, p. 33; R. T. Tomes, *Vict. Hist. of Worcester*, Vol. I., and *Br. Birds*, X., p. 251.—F.C.R.J.]

NESTLING PLUMAGES OF THE INDIAN STONECHAT AND PRATINCOLE.—In the *Journal of the Bombay Natural History Society* (August, 1926), Dr. C. B. Ticehurst has a paper on the down plumages of some Indian Birds. Amongst them those of the Indian Stonechat and the Pratincole, which are not given in the *Practical Handbook*, are described as follows:—

Saxicola torquata indica: Down long, plentiful, pale grey; Distribution, supraorbital, occipital, humeral and spinal tracts. No tongue spots.

Glareola p. pratincola: Head, wings and back grizzled dark brown and pale buff, with medium dark line down crown; under-parts pale buff.

LATE SWALLOWS IN HAMPSHIRE, SUSSEX AND SUFFOLK.—In the *Practical Handbook*, autumn records of Swallows (*Hirundo r. rustica*) have been located as within the normal range of date up to the third week of November. The number of those that linger on migration after the middle of October naturally varies within wide limits from year to year, but, judging by the frequent notices in the daily press, the numbers in 1926 would appear to have been considerably above the average. Mr. Richmond E. Paton now writes that he saw one at Christchurch, Hants, on November 24th, and on the same day one was seen on the River Waveney, on the borders of Norfolk and Suffolk, just above Bungay, by Mr. E. J. Hunt; while Mr. H. W. Finlinson reports one from Lancing College, Sussex, on December 6th.

GREAT SPOTTED WOODPECKER BREEDING IN SUTHERLAND.—Mr. E. G. Paterson records (*Scot. Nat.*, 1926, p. 92) that a pair of *Dryobates major* reared a brood of five at Bal Blair, Invershin, in 1926. The nest was found on May 29th with young almost able to fly. The extension of this bird as a breeding-species in Scotland in recent years has been remarkable. In 1924, extensions were recorded for Fifeshire, Morayshire and east Inverness-shire (*cf. antea*, p. 111), while the authors of the Scottish Report in 1925 give further evidence of its spreading, records coming from Ayrshire, Aberdeenshire, Banffshire and east Inverness-shire (*Scot. Nat.*, 1926, p. 74). Except as a migrant (probably of the northern form), we believe the bird was previously unknown in Sutherlandshire.

SCOPS OWL IN SHETLAND.—An Owl, which has been identified by the authorities of the Royal Scottish Museum, where it now is, as *Otus s. scops*, was found dead on the island of Foula on May 10th, 1926, and reported by Mr. W. H. Greenaway (*Scot. Nat.*, 1926, p. 68).

WHITE NESTLING SNIPE.—With reference to the note on two white nestlings of the Common Snipe (*Capella g. gallinago*) in north Lancashire (*antea*, p. 79), Mr. H. W. Robinson informs us that a pure white bird of the year was shot in the neighbouring county of Westmorland during the first week in September, which he suggests may have belonged to the same brood, as it had no ring upon its leg. He states that it had dark eyes, and enquires if any pure white Snipe have been real albinos with pink eyes before going through the taxidermist's hands, for his experience is that practically all have dark eyes.



LETTERS



BIRD'S-NESTING BANK VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Tucker's letter (*antea*, p. 158), I have found many nests of various species of birds robbed apparently by field-mice. In one case there were two nests of Willow-Warbler within six yards of each other; one contained eggs and the other newly hatched birds. A few days later the birds had gone and the eggs were sucked and each nest had a mouse-hole entering towards the back from the earth beneath. You will often find robbed Whitethroats' nests with a round hole at the bottom suggesting the entry of a mouse from beneath; sometimes the whole bottom of the nest is pulled out. I have put a mouse out of a Wren's nest, that a day or two before had contained three fresh eggs, and the nest had been converted into an almost completed mouse nest.

This year I found a Yellow Bunting's nest with two half-grown nestlings in a tiny gorse one foot from the ground. My spaniel—a great mouse hunter, but safe with nestlings—dashed under the nest and started to dig, immediately unearthing a third nestling, almost stone-cold but unhurt—he continued to dig wildly after the mice. I replaced the third between the two other birds. In about an hour I returned and found the rescued nestling and a companion in the nest but the third was gone. The dog again dashed under and dug at a mole-hole, but we did not find the other nestling. Two days later all had gone. The Yellow-Buntings seemed to suffer from mice robbery particularly this summer. If the birds are a fair size they only take one a day. You can sometimes see the track where they have pulled the nestling over the edge of the nest, for nests in gorse are not easily entered from below.

I am sure Linnets are often robbed by mice—who pull the linings of the nest about—and this summer I saw a mouse destroying a Hedge-Sparrow's nest at a height of about 3½ ft. up in a thorn. L. E. TAYLOR. GODALMING, SURREY.

COMMON BUZZARDS HOVERING.

To the Editors of BRITISH BIRDS.

SIRS,—I am surprised to see from the note on p. 178 (*antea*) that it is regarded as something very rare in Great Britain to see the Common Buzzard "hovering." I have never been in Buzzard country in England and have therefore never observed Buzzards in this country, but I am glad to say they are still by no means rare in most parts of Germany and there I have often seen them hovering. They do not hover so long as the Kestrel often does, but exactly in the same manner. This is not a new observation, for Naumann and other continental writers have described it already. The Rough-Legged Buzzard hovers more frequently than the Common; in fact, in winter, it is a common sight to see them hovering over the fields and meadows.

ERNST HARTERT.

SIRS,—The Common Buzzard has at least two methods of obtaining its food: one is for it to fly slowly along, a few feet above the ground, and suddenly drop on anything noticed beneath it; the other is for it, either when flying slowly along or else soaring round, to begin hovering above its intended prey and at the right moment descend, with vertically held wings, on to its food. Mr. W. H. Thorpe states

(*antea*, p. 178) that he has never read any previous account of this habit, but I recorded the fact in Vol. XIX., p. 65. Peregrine Falcons (*Falco p. peregrinus*) will also frequently hover and so will Merlins (*Falco c. æsalon*), and the same applies to the Raven (*Corvus c. corax*).
R. H. BROWN.

THE BIRDS OF SURREY.

To the Editors of BRITISH BIRDS.

SIRS,—I am engaged in collecting material for a book dealing with the birds of Surrey. Should any readers of *British Birds* feel disposed to favour me with notes relating to the subject, I shall greatly appreciate their assistance.

The records need not necessarily only refer to rare visitors to the county. Observations on the distribution of the more local nesting species, dates of the arrival or departure of migrants, and notes of interest relating to the commoner birds will also be most welcome.

Although in a book of this description the question of distribution naturally takes pre-eminence, the habits of the birds, as observed in the county, should, in the opinion of the writer, form an important feature of the work. Any notes bearing upon habits will therefore be of great value.
HOWARD BENTHAM.

"THURSLEY," TADWORTH, SURREY.

GREAT TIT EATING NUTS.

To the Editors of BRITISH BIRDS.

SIRS,—Surely it is not unusual for the Great Tit (*Parus m. newtoni*) to eat nuts (*antea*, p. 177)? I have frequently watched one fly to a branch with a hazel-nut in its beak and then, holding the nut with one foot, peck vigorously at it until the shell is split sufficiently to allow the Tit to extract the kernel.
R. H. BROWN.

REVIEW.

British Birds. Written and illustrated by Archibald Thorburn. Vols. III. and IV., 8vo (Longmans, Green). 16s. net per vol.

MR. THORBURN has now completed his task of giving us an octavo edition with 192 coloured plates from entirely new pictures of his *British Birds*. Mr. Thorburn's plates are certainly beautiful and the colours have on the whole been very well reproduced in these volumes, though some of the browns (especially in Volume IV.) have suffered somewhat here and there in this respect. Most of the birds are represented in their adult and brightest plumage, and as a series of pictures of our birds in such plumage Mr. Thorburn's volumes cannot be excelled. Only occasionally, however, do we have the duller young or winter plumages depicted, though such birds are so much more difficult to identify. Moreover, some of the rarer species figured here in adult breeding dress are seldom seen thus in this country, for instance, Sabine's Gull or the rarer Grebes. Amongst the waders, Mr. Thorburn has been much more generous with figures of birds in winter plumage.

The letterpress does not pretend to be complete in any way, and it would be unfair to criticize it in detail. Mr. Thorburn sticks to an old-fashioned nomenclature and many of the scientific names he uses will be scarcely recognized by the younger generation of ornithologists.

Attention may be drawn to the large paper edition of this work. In this edition, which is limited to 205 numbered copies, the plates are mounted on thick paper of a neutral brown. The lettering is printed on a covering tissue paper and the plates are well set off with their generous margins of brown, the size of the page being much larger octavo than in the ordinary edition. The volumes are well and strongly bound.

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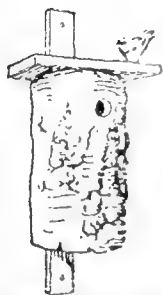
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NOTES ON ALBERTA WADERS INCLUDED IN THE BRITISH LIST.

BY

WILLIAM ROWAN, M.Sc., F.Z.S., M.B.O.U.

PART VI.

DOWITCHER AND SPOTTED SANDPIPER.

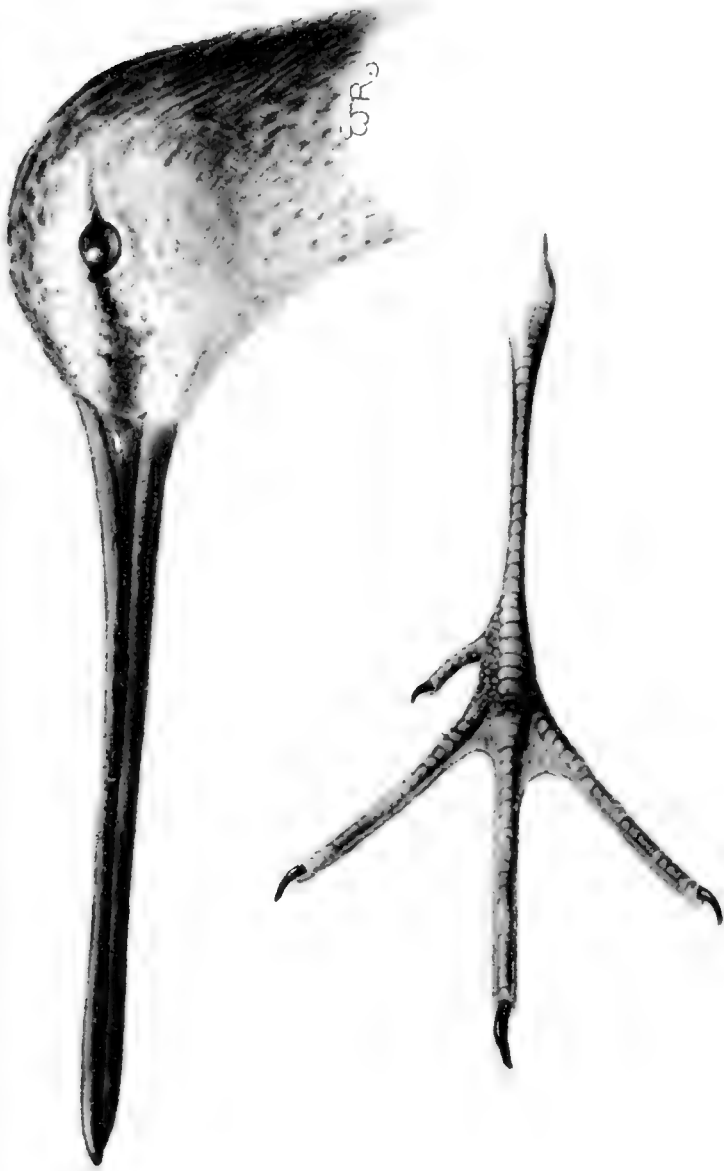
(Plate 8.)

Limnodromus griseus, RED-BREASTED SANDPIPER
(A.O.U. Check-List *Macrorhamphus griseus*, Dowitcher).

THE Dowitcher or Red-breasted Sandpiper or Snipe, although one of our common waders, is irregular in numbers from year to year. Its dates stretch continuously from May 6th to the last half of October. At the Point it is scarce in June and July, but it breeds in various localities in this part of the Province. The migrant that comes through sometimes in huge numbers is the western sub-species, *L. g. scolopaceus*. It is readily told from the breeding form in life as well as in the cabinet, but to this point I shall return later.

The Red-breasted Snipe is a bird likely to turn up almost anywhere on the water's edge. Wooded or prairie lakes, reedy shores or barren mudflats are all attractive to it. At the Point, where we have both mudflats and shallow, reed-fringed bays, it is one of the few shore-birds that constantly patronises the latter, for the majority of waders appear to avoid them. The species tends to keep rather to itself and flocks may reach large proportions. We have seen several hundreds together. Such an aggregation can be recognized at a considerable distance owing to the habit of bunching, one bird keeping close to the next. It is not quite so marked as in the case of the Stilt Sandpiper, but is in great contrast to the scattered bands of Yellowshanks, about the only species that might be mistaken, on account of size, for the Red-breasted Snipe and then only at rest. The latter always wades when it feeds as it has a probing bill, and the Yellowshank usually does the same. In flight the birds cannot possibly be confounded, nor when feeding in flocks, owing to the difference in their characteristic formations.

The Red-breasted Snipe appears larger than it is by virtue of its inclination to wear its feathers loosely puffed out, giving it the ball-like appearance of a canary on a frosty morning. Except when feeding, and on the rare occasions that it shows



RED-BREADED SANDPIPER.

Adult, May, nat. size.

Copyright by W. Rowan.



alarm, it carries its head well tucked in to the shoulders with its bill pointing down at an angle of about 45 degrees (Fig. 16). It presents a very characteristic appearance and unlike that of any other bird with the exception of the Godwits. In some lights, when size is difficult to judge, it is quite possible to mistake the one for the other. However, Godwits hold their bills nearer the horizontal than Red-breasted Snipe. Godwits, as pointed out by E. C. Arnold (*British Waders*), normally carry their necks tucked in and not stretched out as frequently depicted. In Figure 16 I have endeavoured to give my impressions of the Marbled Godwit (*Limosa fedoa*) at rest and alarmed. The bird, at rest, in outline, is very similar to a Red-breasted Snipe, and in circumstances where size has to be guessed without anything at hand for comparison, the mistake is easily made, and has actually been made to my knowledge several times. Arnold (*loc. cit*) says, "Godwits, roughly speaking, in their autumn plumage are Whimbrels with upturned bills and no stripe on the crown." In the Province, our Whimbrel—the Hudsonian Curlew (*Numenius hudsonicus*)—is not only easily mistaken for the Marbled Godwit, which it resembles in size and general coloration, but habitually associates with it and so can be very easily overlooked. Like so many of the other waders, this species is not supposed to occur in the interior at all, but it is as a matter of fact a regular migrant. I have discovered that the two species can be separated without error at a very great distance by the carriage of the head, and hence the bill. In contrast to the Godwits, the Hudsonian Curlew holds its bill horizontal, and long before head-stripes or any detail of pattern or shape of bill can be made out, the bird can be correctly identified on the strength of this alone (Fig. 16). My memory of the Whimbrel is not fresh enough to know whether this would apply on the British coasts but I should imagine so. I have found it a most useful character out here, in fact *the* most useful.

In flight the Red-breasted Snipe can always be told by the white line down the back—from the rump *forwards*, to the shoulders—if seen from behind and by the angle at which the long bill is carried when seen in profile. The head is tucked in even in flight. The white streak on the back of the Red-breasted Snipe is not unlike that of the Turnstone, but the black and white crescent of the latter is wanting.

Red-breasted Snipe are generally ridiculously tame and will permit of a very close approach before beating a querulous retreat. If specimens are collected from a flock the remainder



FIG. 16.—FOREGROUND : LONG-BILLED DOWITCHERS (LEFT ♀, OTHERS ♂♂).
 DISTANCE : LEFT TO RIGHT—(1) MARBLED GODWIT ALARMED, (2) AT REST, (3) HUDSONIAN CURLEW; FLYING : DOWITCHERS.
 (Copyright by W. Rowan.)

will return again and again, and even repeated shooting does not seem to convey the idea of danger to them.

This bird has a considerable variety of notes. They are all rather soft and lack the ringing quality of the Yellowshank. The alarm is a musical

∪
"tyit,"

varying in length and accentuation till it sounds two-syllabled, thus

∪ —
tow-it.

The call from which the bird appears to have derived its name sounds to me like

∪ — ∪ —
dow-it-ee.

The "tyit" note is occasionally repeated many times, quite fast, beginning fairly high and descending towards the end, when it is very reminiscent of one of the calls of the Lesser Yellowshank.

The Red-breasted Snipe occurs right across the continent from the Pacific to the Atlantic, being, no doubt, most abundant on migration in the prairie provinces. It is one of our common waders. It has at different times been divided into two full species and into two sub-species and now threatens to be reinstated in its original glory as a single species without subdivision of any kind. Of its breeding-grounds only certain areas are known.

While I do not propose to discuss the matter in detail, a few suggestions as to what is probably the true situation may not be out of place. We have for some time kept careful watch for those Red-breasted Snipe that differ noticeably from the western sub-species *scolopaceus*, and have succeeded in collecting a fair series of skins. It is frequently maintained that we get the true eastern form, *griseus*, in the prairie provinces and also in British Columbia. Unfortunately, I have not been able to examine specimens from British Columbia, but I have had the loan of several birds taken on the prairies that have been attributed to this form. None of these, however, and none of my own taken at the Point is typical *griseus*. They can be told without difficulty either in a series or by themselves. The breeding-grounds of *scolopaceus* are known—roughly, from the mouth of the Mackenzie

westward. No examples of *griseus* have been recorded from here, but neither have breeding-birds been taken elsewhere. On migration the eastern race has a puzzling distribution, further fogged by the occurrence of the birds that we get here, somewhat resembling the real thing and constantly taken for it.

For the last three years it has been evident that the Red-breasted Snipe breeds in Alberta even further south than Edmonton. I need not detail the evidence except to say that finally, in June, 1925, Mr. A. D. Henderson, of Belvedere,



FIG. 17.—RED-BREASTED SNIPE BREEDING COUNTRY.
(Photographed by W. Rowan.)

Alberta (about sixty miles N.W. of Edmonton), took a set of eggs and kindly got me a couple of skins from a spot to the west of Belvedere. This is heavily wooded country and the home of the Solitary Sandpiper and both Yellowshanks. The photograph (Fig. 17) is of a lake of the same type on this side of Belvedere on which I took a Red-breasted Snipe in the middle of June, 1924, that was almost certainly a breeding-bird, although eggs were not obtained. This skin, and those taken by Henderson, and those collected at various times on the Point, are all of the same type, rather like *griseus*, but larger and differing in some points that appear to be constant. But till we have a working series, as there is considerable variation, we can decide nothing definite. But all the facts together suggest that we are either on the verge of the

breeding-range of *griseus*, hitherto unknown, and our birds belong to that race but are not typical, or our Red-breasted Snipe represent a third and good sub-species. Both the races at present recognized show considerable variation, but typical birds of either are well defined and characteristic. It was not till two years ago that I was convinced of this, but even now, with a series of sixty skins, there are points that require further elucidation.

The long-billed Red-breasted Snipe coming south in the fall arrive early in August, adults only at first, but followed before the month is over by birds of the year. These may be either in juvenile or first winter plumage or moulting, for there is great latitude in the rate of moult. The same applies to the adults. I have two skins taken at the beginning of August that are in almost complete winter plumage, but these are most exceptional as the vast majority, even towards the end of the month, are still in very worn summer dress. The primaries are evidently moulted first and the wings are generally in markedly ragged condition when the birds get here. One secured in the middle of August had only four old primaries left and the others not yet replaced, but was able to fly without apparent difficulty.

The bill of the Red-breasted Snipe is invariably depicted as being pitted towards the tip. In life, however, as with the Snipe, it is perfectly smooth. In our dry Alberta climate the first pits may appear within two hours of death.

The following description of a downy chick (Fig. 18) is from a skin kindly lent me by Mr. H. B. Conover of Chicago, who collected it on Hooper Bay, Alaska, on June 23rd, 1924.

Fore-head white suffused yellow-buff; black median band from base of upper mandible to crown; crown black suffused tawny with a few irregular whitish tufts; crescentic line of white from top of eye back to sides of neck above a crescentic line of blackish and buff; nape as crown; cheeks richly suffused buff anteriorly and irregularly dotted blackish posteriorly; black line gape to eye; remaining upper-parts mottled black and buff with irregular tufts white, the latter forming more or less well defined longitudinal lines down back; chin whitish; belly and throat suffused pale buff; breast suffused deep buff, down black at base; vent as back; several days old; "parent collected; legs olive with blackish stripes down side; bill black; iris brown."

This year (1926) we had the opportunity, at Klondike City, Alberta (about 120 miles north-west of Edmonton), of seeing something of the Red-breasted Snipe on its nesting grounds.

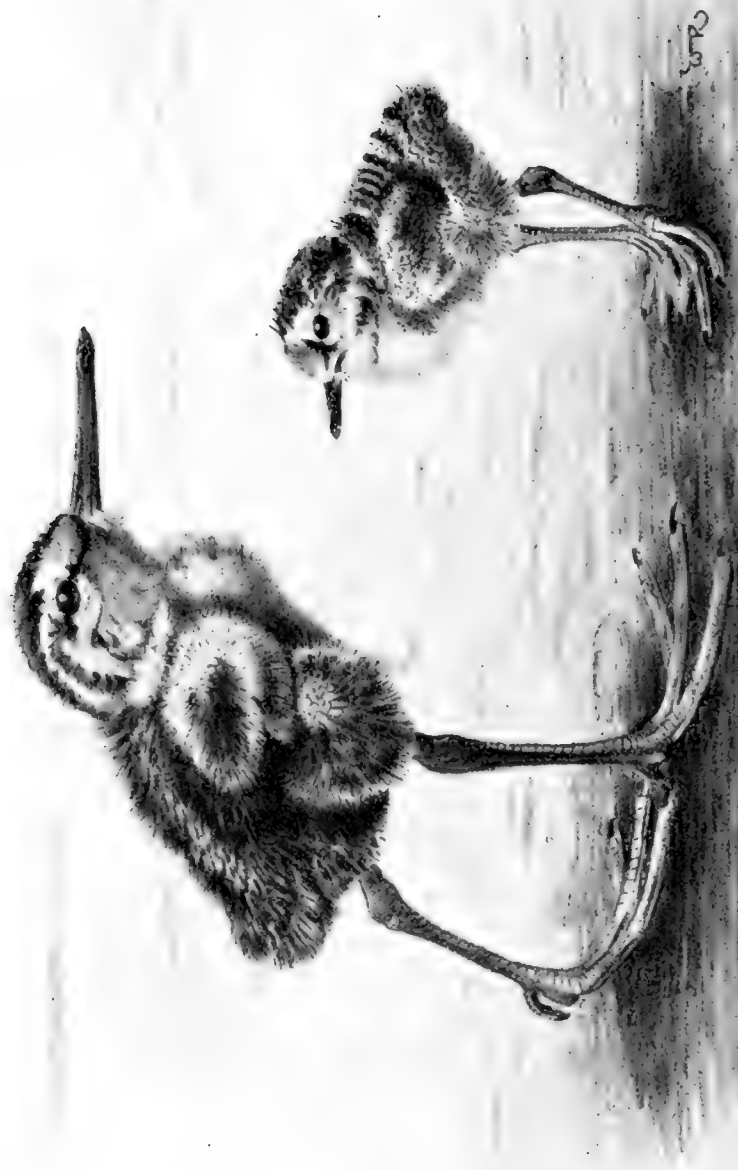


FIG. 18 —LEFT: DOWNY LONG-BILLED DOWITCHER (RED-BREADED SNIPE) (*Limnodromus griseus scolopaceus*). RIGHT: DOWNY SEMI-PALMATED SANDPIPER (*Ereunetes pusillus*).
For Description see pt. iv.

Both from Bering Sea, Alaska. Collection of Mr. H. B. Conover.
(Both 3 life size.)
(Copyright by W. Rowan.)

This is the breeding area discovered by Henderson, who very generously made all arrangements for us and secured us an excellent guide. It is typical muskeg and jackpine country, of which a fuller description will be found in the notes on the two Yellowshanks and the Solitary Sandpiper, also breeding here in numbers. We were probably a little early for Red-breasted Snipe. Two nests were found, the one at the time of discovery having only two eggs, the other a full and fresh clutch of four. I do not think any system ever devised for

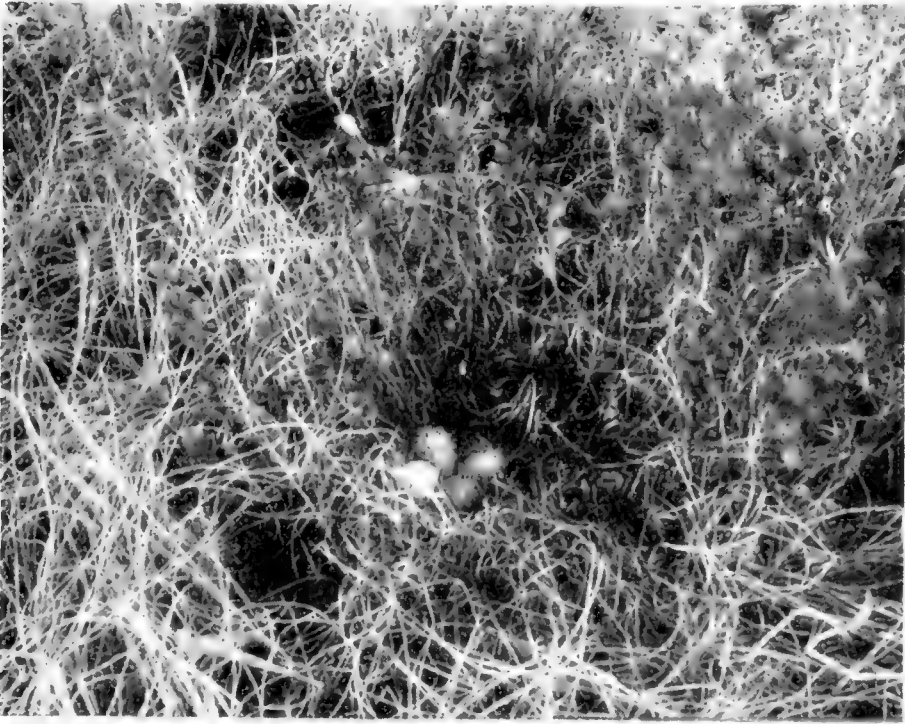


FIG. 19. NEST AND EGGS OF RED-BREASTED SNIPE. JUNE, 1926, ALBERTA.

(Photographed by W. Rowan.)

locating nests would prove effective with this species. Both our nests were flukes. One was the reward of much hard work, but it was discovered without any previous clue, the bird being unexpectedly "jumped." In the case of the other, three of us were sitting together on a deadfall watching a pair of Bonaparte Gulls (*Larus philadelphia*), when a Red-breasted Snipe, without warning, dropped from a clear sky to the ground only a few yards away from us. It was promptly lost to view in the tall grass. We gave it a few minutes' grace and then tried to walk it up, but a lengthy hunt proved unavailing. Presently, however, I happened to be back for a fresh start at the spot at which we were sitting originally

and looking over the ground, saw the bird rise some seventy yards away from the spot on which she had landed. Another member of the party happened to be within twenty yards of her with his back turned. Taking no chances of losing the place again, I directed him to it and he duly walked right up to the two eggs. It is very probable that the bird had just laid the second. This was about ten o'clock. The nest (Fig. 19) was merely a grass- and moss-lined depression in a hummock in the middle of a small, fairly dry muskeg with tamaracs and spruces dotted through it. Fifteen yards from the nest was a clump of trees with a Bonaparte Gull's nest in one of them.

Ridiculously confiding as these birds are on migration, they proved the same here. Photographing the bird on the nest (after the set of four eggs had been completed) was simplicity itself (Fig. 20). We merely put up the cameras beside the nest and, sitting at the foot of the adjacent trees, worked them with distance releases. The bird paid but slight attention to the two cameras and went on to the eggs with only a few minutes' hesitation, right under the evil eyes. Once or twice both birds of the pair came in together, and this seemed to make them both more nervous, for it always took much longer for the sitter to sum up the requisite courage to settle down. Moreover, when she was settled, and the other bird, apparently satisfied, flew away, she got up and followed him. Several times, either when being purposely put off the eggs, or when getting suddenly nervous and departing of her own accord, she would fly to a neighbouring tree, singing as she went. From the long bill, the sitter was certainly the hen, so that, as with the Yellowshank, both sexes no doubt perform. The song is reminiscent of that of other waders, but highly variable and usually short. Probably we did not hear it often enough to grasp its characteristics. The bird rises to some height and flies with rapid wing-beats, trilling and twittering in an almost indescribable manner. It may then drop to the ground or perch on a tree, the most usual thing being the latter. We also witnessed coition on the top of a stump.

The birds at the second nest behaved rather curiously. On account of the rarity of the eggs—with the exception of Henderson's set, only eggs of *scolopaceus* have previously been taken—the finder, quite rightly, deemed it advisable to take them on the spot, but in order that we might photograph and then collect the birds themselves, he thoughtfully substituted a set of Wilson Phalaropes (*Steganopus tricolor*) picked up in



FIG. 29. RED-BREASTED SNIFE ON NISF. JUNE, 1926, ALBERTA.
(*Photographed by W. Rowan.*)

the neighbourhood. These eggs were somewhat smaller, but not very dissimilar. He watched the return of the sitter. She gave the eggs one glance as she approached and then flew away as though a gun had been fired at her. When later on, we went to try our luck with the cameras, it was only to find the site completely deserted.

On our last two days in this district, June 6th and 7th, I tried to secure a series of skins. Out of deference to my fellow collectors, who were oologists, I had hitherto refrained from shooting any Dowitchers. My gun had met with an accident and I had nothing but a 32 collecting pistol wherewith to procure my specimens. Had I been after any other species I should probably have had to go home empty-handed. As it was I had better luck, for at times during the trip it had proved possible to get even within a yard of Red-breasted Snipe. One particular muskeg, which unfortunately happened to be of the floating variety, attracted these birds especially, and here I hunted. It was a pastime that I shall never forget. The birds were extremely difficult to see on account of their protective coloration, and the only sure way of spotting them was to watch them down. Keeping my eyes glued on the spot on which my prospective victim had settled, I would then proceed to stalk it. Progression on the floating grasses was like walking on a spring mattress with most of the springs missing. Suddenly, from time to time, I would step into bottomless water, only saving myself from complete submersion beneath the vegetation by spreading my arms or throwing myself out full length as soon as I trod on nothingness. For once rain and thunder went unheeded, for there wasn't a dry spot on me in any case. Here I saw as many as six or seven birds from time to time giving chase to single individuals and singing in the chase. These were no doubt males hunting mates after the manner of ducks.

The nests of these trustful and confiding birds must be about the hardest of all shore-birds to find. The owners give no clue whatever as to their whereabouts, because apparently they care nothing whether human beings are around or not. One has absolutely no idea when one is in the neighbourhood of a breeding pair. One may see the birds almost anywhere over the interminable muskegs, but whether they are merely feeding or "standing by" a sitting mate one cannot guess unless one happens to "jump" the mate. About the only possible "system" is the one we adopted, to labour through mile after mile of muskeg and trust that by one of those miracles that happens once in so often one may chance to

walk into a sitting bird. In our whole stay this happened just once, and then only to one member of the party. For myself, I wore out every pair of shoes I had with me. If the Red-breasted Sandpiper should become scarce in the future, not even the most narrow-minded of the egg-collector's enemies will be able to point a finger at him.



FIG. 21.—NEST AND EGGS (IN BANK) OF SPOTTED SANDPIPER.
(Photographed by W. Rowan.)

Tringa (A.O.U. Check-List *Actitis*) *macularia*, SPOTTED SANDPIPER (see Plate 7).

Possibly on account of its extreme abundance, or perhaps because whenever I have encountered the Spotted Sandpiper breeding I have been in quest of something more interesting, I have remarkably few notes on this species. Not that there would be much to say in any case, for it is an exact duplicate in calls, manners and habits, of the Common Sandpiper (*Tringa hypoleucos*) at home. I have even observed it leaving its nest in that curious manner adopted by *hypoleucos*, creeping through the grass like a mouse with wings drooping,

tail turned down and fanned, to the accompaniment of curious and unusual noises.

The usual note is

— —
“ weet weet.”

The flight is characteristic, rapid wing-beats for a few moments followed by gliding for about the same length of time. The bird seldom takes long flights but prefers to do a semi-circle to land a hundred yards or so ahead, till again approached, then to repeat, till the nest has been left a long way behind, when it will suddenly turn and go back, doing a much longer flight than is its wont. I have never observed the spring song-flight so characteristic of the Common Sandpiper, but that is probably only because I have never troubled to watch the Spotted during the nesting period. Here it most usually nests on river banks though it breeds also on many lakes. The accompanying photograph (Fig. 21) was obtained on one of the wooded lakes, a type that is evidently preferred to open ones. This nest, tucked into the bank, is very typical. (The usual fourth egg was accidentally broken.)

At the Point, which is devoid of trees, we get the species only on migration, the earliest date being May 5th, and the latest in October. I have never seen anything like a flock of Spotted Sandpipers, although the birds may be quite numerous. They always seem to be quite independent of one another.

WALL-BUILDING BIRDS.

BY

THE REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., ETC.

MANY years ago I read in Irby's fascinating book on the *Ornithology of the Straits of Gibraltar* that the Black Wheatear (*Enanthe l. leucura*), which nests in holes and clefts of rock, had the extraordinary habit of making a sort of wall or screen of stones in front of its nest. He describes and figures one exceptionally perfect case where there was a barrier of stones about 9 inches long, the same in width, and $2\frac{1}{2}$ inches high. Colonel Verner removed the stones and counted them, and found 76 in the foundation of the nest, while the wall contained 282 more, total 358 ! The largest stone was 2 inches long by $\frac{3}{4}$ inches wide and $\frac{1}{2}$ inch deep, and the total weight of the stones was $4\frac{1}{2}$ lb. The Black Wheatear is large for a Chat, but is by no means a big bird, and one wonders how the stones are carried to the hole. As far as I know no one has seen the Black Wheatear engaged in this task and it would be an interesting piece of research work to see whether the bill or the feet are used. Although Dr. Hartert states that the Falcon-billed Lark (*Rhamphocorys*) uses its bill for this purpose it would seem more natural for the Chats to use their feet, as the weight of a stone would destroy their balance in flight. But this is a point which can only be settled by observations on the nesting bird. When I first began to work among the birds of north Africa, it did not take long to discover that the African Black Wheatear (*Æ. leucura syenitica*) has the same habit as its Spanish ally, but even more strongly developed. Time after time we found old nests in pot holes or crannies in the face of cliffs, and wherever there was room there was invariably a glacis of loose stones, sometimes only twenty or thirty, but often rising to enormous numbers. One which I saw during last year was the largest I have ever met with, and formed an embankment of loose stones near the foot of a cliff which would have filled a couple of buckets to the brim. There is no reason to suppose that this was the work of one season ; the old sites are used over and over again, and in that dry climate the action of the weather hardly affects them at all. One nest of *Æ. l. syenitica* contained no stones, but it was in a very unusual site : placed a few inches down a hole in the steep face of a mud bank in a dried-up river bed, and stones would either have blocked up the entrance to the hole or fallen outside. Other Chats in north-west Africa have the same habit. Hartert has recorded it

of *Æ. leucopyga* and I have noticed it also in *Æ. lugens halophila*, though not to the same extent as in the larger Black Chats.

It is, however, even more surprising to find that the habit is not confined to the rock-nesting species in north Africa; it exists in a somewhat modified form among the Larks. The Brown Desert Larks (*Ammomanes deserti*) build their nests under the shelter of a stone or tiny bush, but on the open side one generally finds a little wall of stones arranged loosely at or below the level of the nest. During the spring of 1926 I made the acquaintance of another species of Desert Lark on the stony deserts south of Biskra and in south Tunisia (*A. phœnicurus arenicolor*), and here again was the wall in a primitive form, but in both cases the stones were not loose but wedged well into the sandy soil. Of course it is possible that these little birds use the same sites year after year, and in that case it would not be surprising to find that blown sand had accumulated round the stones and given them the appearance of being built into the ground; but Koenig appears to have also met with similar cases of Desert Larks' nests in which the stones were, as he says, "plastered" into the ground. Other species which "wall in" their nests are the great Falcon-billed Lark (*Rhamphocorys clot-bey*) and the north African Horned Larks (*Eremophila alpestris bilopha* and *E. a. atlas*). In connexion with these last an interesting parallel occurs. The Shore-Lark of northern Europe (*E. alp. flava*) frequently nests on the tundra, where there are often no loose stones and only boulders embedded in the ground. Moreover, the habit of wall-building appears to be confined to Mediterranean species. When looking through the illustrations in H. J. Pearson's *Beyond Petsora Eastward* recently, I noticed in a photograph of a Shore-Lark's nest (facing p. 76) some peculiar objects arranged roughly in two rows on one side of the nest. Referring to the letterpress (p. 79) I found the following interesting note: "On examining the photo of this nest . . . there will be noticed a number of pieces of light brown shale on one side; these were the only stones within a circle of many feet, and I have little doubt were brought by the bird to divert attention from the light-coloured eggs and nest." It is an interesting coincidence to find an arctic subspecies adopting the same habit which is characteristic of the Saharan and Atlas races.

With regard to the object of these walls there is still considerable divergence of opinion. Irby's surmise that they may be of use in draining the nest of superfluous moisture

may be summarily dismissed, as the Spanish birds generally breed in places to which rain cannot penetrate, and in any case the risk of damage by wet during the nesting season is very slight. In north Africa, where the rainfall, as Hartert has already pointed out in an article on this subject in the *Beiträge zur Fortpflanzungs-biologie der Vögel*, I., pp. 2, 21, is practically negligible, the theory is still more untenable. Another explanation is that it is for protection against the visits of *Uromastix* and other lizards. Hartert points out that the *Uromastix* is a vegetable feeder and would hardly be stopped by so small an obstacle, while the small lizards are themselves as light of foot as birds. In default of any better explanation he is inclined to think that the walls are for protection against the frequent and severe wind storms of the desert. This is probably true as regards the nests of the desert-breeding Larks (*Rhamphocorys*, *Eremophila* and *Ammomanes*), but seems to have little bearing on the case of the rock-nesting Chats. It seems more probable that the loose glacis of stones, forming a scree of a foot or even two feet in height, is a useful protection against the unwelcome visits of the smaller snakes, which in all countries are deadly foes to nestling birds and also to eggs. The whole subject is one which deserves fuller investigation, and furnishes an excellent field for anyone who wishes to do some bird-watching with a definite object in the country south of the Atlas and Aurès ranges.

NOTES

STARLING'S GRIP ON A KESTREL.

ONE day early in December, 1926, a farmer of Earith, Huntingdonshire, saw a bird in trouble on the ground. He picked it up and found it was a Kestrel (*Falco tinnunculus*), absolutely incapacitated because a Starling (*Sturnus vulgaris*) had both its feet gripped round one of the Kestrel's legs. With difficulty he loosened the Starling's grip, and it flew away apparently unhurt. E. PEAKE.

[This is a remarkable case, but I know from experience how strong the grip of a Starling is, not only from handling the birds themselves, but also when freeing Swifts which have been brought to the ground in the grip of Starlings, a task of considerable difficulty.—F.C.R.J.]

PROBABLE HAWK-OWL IN MIDDLESEX.

ON December 27th, 1926, at West Molesey Reservoirs, Mr. R. W. Heenan and I saw what was, without any doubt, a Hawk-Owl (*Surnia ulula* subsp). It was perched in the upper branches of a tree at the foot of the largest reservoir and paid no attention to passing motorists on the road close by. At first, from the length of tail, we thought it some strange kind of Hawk, but a nearer approach showed the peculiarly "square" shape of the head and the obvious Owl-shape of the body. It was then facing us, and we particularly noticed (1) the cross-barring on the breast, (2) the black "border" encircling the cheeks, and (3), most important of all, the long tail which, to us, appeared distinctly wedge-shaped, *i.e.* coming to a point.

After a bit it rose and, with a sort of half-twist, dropped into the next tree, where it again settled, this time with its back to us, when it appeared all darkish-brown above, with scattered paler markings, and the tail barred, but not strongly. We tried to get a closer view, and the bird then flew away behind the next tree, and we could not find it again.

W. KAY ROBINSON.

MONTAGU'S HARRIER BREEDING IN WORCESTERSHIRE.

ON June 5th, 1926, I saw a male Montagu's Harrier (*Circus pygargus*) quartering the lake close to a country house

in Worcestershire. Pheasants were being reared, but a protective warning was issued.

In December, I asked the head-keeper if he had seen the bird after I left. He told me that two adults and three young of the year were in the neighbourhood until October. The parents were seen once only at the rearing field, but later, in addition to Mallard, many Pheasants were taken, a marked preference being shown for hens. GUY CHARTERIS.

WOOD-PIGEON BUILDING ON NEST OF MISTLE-THRUSH.

IN 1925, a Mistle-Thrush (*Turdus v. viscivorus*) built on an horizontal bough, in a beech tree in my garden near Edinburgh and reared her brood; a Wood-Pigeon (*Columba p. palumbus*) then took possession and built a nest upon the top of that of the Mistle-Thrush, the effect being very strange: a Wood-Pigeon sitting on a bulky nest of hay, grass and twigs. During forty years of careful observation, such an incident has never before come under my notice.

WILLIAM SERLE.

[Mr. Serle also reports a Spotted Flycatcher (*Muscicapa s. striata*) similarly utilizing the nest of a Song-Thrush (*Turdus ph. clarkei*), but in this species the habit has been already frequently recorded, cf. Vol. IV., p. 120; VI., p. 187; X, p. 117.—EDS.]

KENTISH PLOVER IN DORSET.

ON April 24th, 1925, we saw a Kentish Plover (*Charadrius a. alexandrinus*) near Studland, opposite Poole harbour. There was a good light and we watched the bird with field-glasses for a quarter of an hour. There were a few Ringed Plover there, so comparison was easy, and we noted the slightly smaller size of the bird in question, its generally lighter colour and less prominent chest bands, and its black legs. Since then we have seen a great many Kentish Plovers in Egypt and so confirmed our convictions.

S. T. C. TURNER.

G. O. BUDD.

RING-OUZEL IN SUSSEX IN WINTER.—Mr. Bernard J. Ringrose writes that he saw an adult, and probably male, *Turdus torquatus*, near Horsham on December 24th, 1926. He remarked that it was very tame and evidently hard pressed for food.

EARLY NESTING OF BLACKBIRD IN SUSSEX.—Mr. Raymond Carlyon-Britton informs us that Mr. Ernest Dean, of Parham, found a nest of *Turdus m. merula* with two eggs on December 15th, 1926, and that a third egg had been laid the next day.

SNOWY OWLS IN THE ATLANTIC.—A large migration of Snowy Owls (*Nyctea nyctea*), and also Goshawks (*Accipiter gentilis*), took place in the north Atlantic in November, 1926, many Snowy Owls being captured on board ships and brought to this country. Exact details of position and dates have been difficult to obtain, but it would appear that the large majority of the occurrences were on the American side of the Atlantic, and I have heard of only one Snowy Owl as having been probably captured "off north Scotland," but details are not available. Mr. D. Seth-Smith informs me that Mr. H. W. Drewitt tells him that a Snowy Owl arrived on his farm at Colworth, Chichester (Sussex), at the end of November and stayed for about three weeks. Mr. Drewitt writes: "Its principal food seemed to be Moorhens and it was quite tame, allowing approach to within five yards, so probably it too was an escape from a passing ship." Dr. Witmer Stone, the Editor of the *Auk*, is asking for information with a view to publishing a careful report of the migration, and any details of occurrences known to readers of *British Birds* will be welcome for transmission to Dr. Stone.—H.F.W.

BUZZARD OVER LONDON.—The Hon. G. Charteris informs us that early in October, 1926, he saw, as he was entering Hyde Park from the Bayswater Road, what appeared to be a Common Buzzard (*Buteo buteo*), flying at a moderate height in a north-westerly direction.

FLAMINGO IN HAMPSHIRE AN ESCAPE FROM CAPTIVITY.—With reference to the note on page 156 of a Flamingo, which appeared to have been a wild bird, seen by Major C. Paddon at Beaulieu on September 31st, 1926, it would now seem certain that this bird was an escape from captivity. Sir Thomas Troubridge informs us that having seen a paragraph in *The Times* he now finds that Lt.-Col. F. E. E. Bailey lost a Flamingo from his aviary at Lake, near Salisbury, in the early summer. Mr. E. S. McEuen informs Sir Thomas Troubridge that a Flamingo has been haunting Langstone Harbour since last September, when it was seen coming from the west over Portsmouth Harbour. It is thought that there may be two Flamingos in this neighbourhood, another having been lost from Shere in December.

FLEDGING-PERIODS: *Errata*.—In the article on "Fledging Periods" (*antea*, p. 175), under LINNET, for "R. C. Boulton" read "R. Carlyon-Britton," and for "on the 13th day" read "12 and 11-12 days (2 cases)." Under Fledging-Period, for "12-13" read "11-12."



LETTERS



PECULIAR NOTE OF RAVEN.

To the Editors of BRITISH BIRDS.

SIRS,—In the early part of March, 1924, while I was trying to locate a few pairs of Woodlarks on a friend's property, I heard a curious note—a triple toc-toc-toc—very high in tone and repeated at intervals of about ten seconds. Looking up, I found that the noise came from a single Raven (*Corvus c. corax*), flying very high overhead—at least 1,000 feet up. The Raven flew over, following a direct line and continued on that line out of sight. It seemed a curious proceeding for three reasons: first, that the Raven should have been alone; second, that, as no Ravens had hitherto nested anywhere within many miles, the bird should have been so far from its nest at that time of year; third, that it should have given out such a call—a call such as I have never heard a Raven make before or since.

I thought no more about the matter until (on March 28th) I heard that a keeper had shot one of a pair of Ravens about three weeks before, and about five miles from where the events described above took place, and in the direction from which the bird had arrived. On April 4th, on going to the place where this bird had been shot, we put a Raven off a nest in a large larch tree. It, therefore, seems possible that the peculiar note which I have described is the invitation note given out by a Raven in search of a fresh mate after its partner has been shot, and that I had seen the bird set out on its search.

H. A. GILBERT.

MAGPIE AND KESTREL NESTING IN SAME TREE.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Jourdain's comment on my note (*antea* p. 199), the reverse is generally the case in Cambridgeshire, in fact, there is positive proof that a pair of Magpies evicted the Kestrels.

Early in April, I saw the Hawks frequenting the "last year's nest" of the Magpies until about the 12th or 15th of the month. I quite expected to find eggs when I climbed up on about the 25th, but found instead, that the Magpies were again in possession and were repairing the old home. I waited until the first week in May and then took the six Magpies' eggs, when, immediately, the Hawks returned and laid five eggs (and hatched off successfully), while the Magpies built again in the same wood, but a fairly long way away.

BARTON, CAMBRIDGE.

G. W. THOMPSON.

COMMON BUZZARDS HOVERING.

To the Editors of BRITISH BIRDS.

SIRS,—I have lived in Buzzard country all my life and can assure Mr. Thorpe that these birds frequently hover. I have seen them do so times without number, and the best exhibition I have seen was in April, 1926, when I saw a Buzzard hover for more than a minute over a grass-field near Solva. In addition, on May 6th, 1924, I saw a Golden Eagle hover for an appreciable time—estimated at twenty seconds—behind Dorback Lodge, Nethybridge. I had the glasses on the bird at the time and could see that it was moving its head and examining the ground beneath it. I am unaware whether the nuptial flight of the Common Buzzard has been recorded, but many observers

must have seen it. The pair float in circles round and round each other near the nesting site, always facing each other, with tails wide spread (to show the barred feathers) and wings held stiffly at a steeper angle than in the ordinary flight. In addition, I have seen a variant of the courtship flight and one which is very like that recorded of the Kestrel. On April 19th, 1926, I saw a Buzzard repeatedly diving past its mate, which was sitting on a projection of the cliff near Strumble Head, squealing repeatedly. The bird shot up into the air after each dive, only to repeat its performance, and almost struck its partner at each dive.

H. A. GILBERT.

[Fraul. J. Schinz also writes from Zurich that she occasionally sees Buzzards hovering over the fields, and sends the following references to the habit by German authors: Brehm, *Tierleben*, I. Band, p. 381; C. G. Friderich, *Natur-Geschichte der Deutschen Vögel*, p. 408; Otto Fehring, *Vögel Mitteleuropas*, II. Band. Raben-Raub Huhnervögel, p. 62.—EDS.]

BIRD'S-NESTING MICE AND BANK-VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to Mr. Tucker's letter (*antea* p. 158), it should be noted that in Rudolf Zimmermann, *Das Liebesleben der Vögel* (Dresden, 1922), on plate 16, an excellent photograph is given of *Evotomys glareolus* in the act of robbing a nest of a Yellow Bunting (*Emberiza c. citrinella*).

Personally, I have the following notes on nests robbed apparently by mice, although I did not see the marauders at work.

In a nest of a Blackcap (*Sylvia a. atricapilla*), found with four newly hatched young on June 3rd, 1922, near Utrecht, about 1 metre from the ground in a hedge, lay, on June 9th, one dead young, and in the bottom of the nest a round hole was bitten.

A nest of a Chaffinch (*Fringilla c. cælebs*), found with three eggs on May 10th, 1925, near Leersum (prov. Utrecht), in an elder tree about 2½ metres from the ground, was found empty on May 23rd. In this case a little round hole was bitten in the side of the nest.

A nest of a Song-Thrush (*Turdus philomelos*) found with four newly hatched young on May 26th, 1925, near Utrecht, about 2 metres from the ground in a beech tree, was found empty on June 1st, while a round hole was bitten in the bottom of the nest.

UTRECHT, HOLLAND.

FR. HAVERSCHMIDT.

To the Editors of BRITISH BIRDS.

SIRS,—In this district (Herefordshire), mice destroy a very large percentage of the first eggs laid by the Wood-Lark (*Lullula arborea*), *i.e.*, those laid between March 25th and April 20th. It is difficult to say what proportion of nests are so destroyed, but I should put it as high as 70 per cent. at least.

H. A. GILBERT.

To the Editors of BRITISH BIRDS.

SIRS,—I am able to give some further information about mice as marauders. In the summer of 1921 we found several nests of small birds, some of them more than six feet from the ground in trees, destroyed. Later on, young trees in the woods of Born, near Olten in Switzerland, were damaged, the bark being gnawed. We began to put traps in the trees, some of them near precipitous rocks more than 15 feet high. We caught some dozen of bank-voles and long-tailed field-mice (*Evotomys glareolus jurassicus* and *Apodemus sylvaticus bornensis*) and, once, we caught a climbing common vole (*Microtus agrestis*).

G. VON BURG.

OLTEN, January 5th, 1927.

REVIEWS.

Aviculture. A Treatise on the Management of Foreign and British Birds in Captivity. Published by the Avicultural Society. Vol. I., 1925. Hertford, printed by Stephen Austin & Sons, Ltd.

THIS book consists of three parts: an introduction of 18 pages; a series of articles, occupying 306 pages, on special groups of Passerine birds, by the late Mr. H. D. Astley, the late Dr. A. G. Butler, Messieurs A. Decoux, J. Delacour and M. Legendre, Mr. E. G. B. Meade-Waldo, Capt. G. E. Rattigan, Mr. D. Seth-Smith and Mr. W. Shore-Baily; and useful indices extending to 16 pages.

Prince Charles Lucien Bonaparte, as we all know, was a famous ornithologist; his uncle, the great Napoleon, if his attention had not been so much taken up by other affairs, would have been a first-class aviculturist. His maxim, "The moral is to the physical as three to one," contains the main secret of all success in keeping wild birds alive in captivity. The introduction to this book is all useful and good, but, unfortunately, omits the most important item—that of giving mental occupation to the birds. Extracts from the *Avicultural Magazine*, 3rd Series, Vol. 2, Dec., 1910, pp. 67-69, might have been appropriate.

Many of the chapters by Monsieur Delacour will make the reader long to visit, or revisit, the thick forests and open spaces of the Far East and of the Western Hemisphere.

Lovers of British birds will find most interest on pages 41 to 46, where Mr. Meade-Waldo writes delightfully on the Crow Tribe; on page 135, where Dr. Butler tells of a habit of the Chaffinch nestling, and on pages 221 to 226, in which are Mr. Astley's experiences of Thrushes.

In 27 plates, figures, useful for their purpose, are given of about 128 different species of birds.

S. S. FLOWER.

Records of Birds Bred in Captivity. By Emilius Hopkinson, C.M.G., D.S.O., M.A., M.B., B.Ch. (Oxon), F.Z.S., M.B.O.U. London (H. F. & G. Witherby), 1926, pp. i-ix., 1-330.

This is a more important and valuable work than might be inferred from the author's modest preface. To construct a proper conception of any "form" of bird, and to be able to classify it—as a monotypic genus, as a species or as a subspecies, it is necessary to know far more about it than its external appearance and its internal anatomy; we want to know all we can of its ways of life and of its psychology.

It is these biological studies that are so difficult to condense into writing, and it is especially difficult to eliminate the personal element of the observer and recorder. Therefore, we welcome any contribution that helps to throw impersonal and concentrated light on these matters.

Dr. Hopkinson has selected two items that are capable of being definitely recorded:—

1. Species that have been bred in confinement.
2. Hybrids which have been bred.

The first gives clues to several facts, the second to "kindred and affinity."

The author's long residence in Africa has given him but little time for consulting all the records on these subjects, but it is wonderful how many facts he has got together and methodically arranged in this book. The two institutions of which the present reviewer has most knowledge have come off rather shorn of their successes. The Egyptian Zoological Gardens at Giza are occasionally referred to, but only to about twenty years ago; in Annual Reports, published since then, more items of interest can be found. The Gardens of the

Zoological Society of London have done far more in breeding birds than might be inferred from reading this book; it is a pity that references are not given to the "Proceedings," for instance, to the late Dr. P. L. Sclater's papers "On the Breeding of Birds in the Gardens during the last Twenty Years," P.Z.S., 1869, pp. 626-629, and "On the Breeding of the Argus Pheasant and other Pheasants in the Society's Gardens," P.Z.S., 1879, pp. 114-118. And, although the chick lived twenty days only, it might have been mentioned that a Condor Vulture was hatched in Regent's Park on July 1st, 1846.

Of birds in the British List, Dr. Hopkinson does not mention that both Black Game and Capercaillie have been bred in the London Zoological Gardens, and in some cases reared; thus a Capercaillie hatched there June 30th, 1848, lived till May 7th, 1849.

That Spoonbills and Ibises (or *vice versa*?) will pair and hatch out living young is a fact (see footnote, page 253). I have seen more than one of such hybrids on the continent of Europe. S. S. FLOWER.

Birds mentioned in The Acts of the Parliaments of Scotland, 1124-1707.

By Hugh S. Gladstone. (*Dumfriesshire and Galloway Nat. Hist. and Antiq. Soc.*, 1926.)

IN the above pamphlet of 37 pages, Mr. Gladstone has compiled an exhaustive treatise on the birds mentioned in the Scottish Acts of Parliament between 1124 and 1707. Besides such collective names as "Hawks," "Wild-Fowl," etc., he has succeeded in making a list of thirty-six identifiable species, besides a few others, whose mediæval names at present defy interpretation, though these thirty-six include the Peacock and other domesticated forms. All the earlier Acts quoted (up to 1400) relate to the preservation of Hawks, eyries of Gos-Hawks and Sparrow-Hawks, specified in the Act of 1235, being the earliest mention of identifiable species. The later Acts are of three kinds, those for the preservation of certain birds that we should now describe as wild-fowl and game-birds; those for the suppression of species harmful to them, "foulys of reif," as they are termed in the Act of 1457, and those concerned with the cognate subject of heather-burning. It is interesting to note that the latter custom has apparently been an important economic usage from very early times. It was regulated by undated Acts before 1400 and by no less than sixteen different enactments between then and 1685. Mr. Gladstone is of opinion that it was regulated primarily as a safeguard to personal property. Next to the Hawks, the Rook and Dove-cote Pigeons are the earliest mentioned species, the former being restricted and the latter protected by the Act of 1424, while the Black and Red Grouse, Partridge and Plover were first mentioned, being awarded a close season from the beginning of Lent until August, in 1427. The Quail occurs four times between 1551 and 1698, but curiously enough the Capercaillie is mentioned only once and that so late as 1621. The word "Crane" is only mentioned in an Act of 1551, and Mr. Gladstone evidently considers that it is more than probable that it is intended to apply to the Heron.

A full list of the species mentioned is to be found in a useful index at the end of the paper. Space does not permit here of mentioning the curious old names under which many of them are recorded, but Mr. Gladstone may be congratulated on the great pains he has taken in identifying them and for the full explanations that he has given. Altogether, he has accomplished a notable task in early British Bird history, and the Dumfriesshire Natural History Society, now in its sixty-fifth year of useful life, must be thanked for its enterprise in publishing it. N.F.T.

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No. 10.



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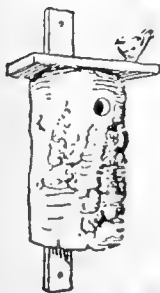
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THE ALTITUDE OF BIRDS ON THE CAIRNGORM HILLS.

BY

SETON GORDON

BIRD travellers often meet their fate upon the High Cairngorms. On Ben MacDhui, at a height of just on 4,000 feet, I have found at different times a Lapwing, a Woodcock, and a Song-Thrush. The snow had just melted and the bodies had been preserved through the winter months. Towards the end of the nesting season—that is in July and early August—one sees unexpected birds on the High Cairngorms. Golden Plover frequently fly up to the south-west top of Brae Riach and sun themselves beside the cairn at an elevation of over 4,100 feet above the distant sea. Sometimes I have seen Ring-Ousels and Mistle-Thrushes there, and once a Blackbird. Meadow-Pipits do not nest thus high, but fly up in summer after the nesting season.

In July, 1925, and again in July, 1926, I saw a young Rook there—a bird almost as unexpected as the Blackbird. But the Grey Crow, although it nests on the lower slopes of the Cairngorms, never seems to fly up to the hill tops.

I have seen the Dipper more than once on the Dee at its source on the plateau of Brae Riach, just 4,000 feet above the sea, and in July it is no unusual thing to see Black-headed Gulls soaring over the top of the Cairngorms.

In mid-July, 1925, I saw a family party of Wheatears on the top of the main summit of Brae Riach, 4,248 feet above sea level. They were insect-catching, and often flew far out over the precipices that drop to the deep corrie to the south of the hill. In May, 1926, I saw a pair of Wheatears very near the hill top, on likely nesting ground. It seems probable, therefore, that the birds nest as high as 4,000 feet, and that the family I saw here in 1925 had been hatched near the hill top.

Dunlin nest on the Cairngorms, and in June, 1926, H. F. Witherby and I found a nest containing four eggs at a height of 3,300 feet, on some boggy ground where at least a couple of pairs of these birds nest every year. In June, 1924, I was surprised to see a Dunlin on the very top of Monadh Mor, 3,600 feet above the sea. The hill was hard and stony—not by any means suitable nesting ground for a Dunlin—but the bird for long refused to rise from the ground, running ahead of me and calling frequently. At last it rose and flew far westward out of sight. Perhaps it was a bird “off duty”

which had been urged by the glorious weather to fly up to the hill top.

I have never seen Golden Plover nesting on the Cairngorms at an elevation of over 3,000 feet, but the Dotterel sometimes lays at the 4,000 feet level, where even the hardy Ptarmigan rarely nest. The Golden Eagle, of course, is often seen high above the highest tops, where it must be soaring at least 7,000 feet above the sea, but it does not nest above 3,000 feet.

At sunrise in September I saw a flock of Swallows pass over the crest of the well-known Lairig Ghru—the pass that leads from Aberdeenshire to Inverness-shire through the heart of the Cairngorms. The birds were flying swiftly south, moving only a few inches above the ground. In April of the same year I was at the head of the pass. The altitude here is just on 3,000 feet, and the ground was covered with deep snow that had lain uninterruptedly for more than two months. On the snow was a dead Robin which must have been overtaken by a blizzard of snow as it was migrating over the pass northwards. Flying into the teeth of the storm the small bird must have lost its way in the thick mist and blinding drift and sunk exhausted in the snow—a stranger in a strange land.

THE "BRITISH BIRDS" MARKING SCHEME.*

PROGRESS FOR 1926.

BY

H. F. WITHERBY.

THE number of bird ringed in 1926 shows a surprising increase over all previous years, as will be seen by the following figures :—

NUMBER OF BIRDS RINGED.

In 1926			23,432		
In 1909	..	2,171	In 1918	..	5,937
„ 1910	..	7,910	„ 1919	..	3,578
„ 1911	..	10,416	„ 1920	..	5,276
„ 1912	..	11,483	„ 1921	..	8,997
„ 1913	..	14,843	„ 1922	..	9,289
„ 1914	..	13,024	„ 1923	..	12,866
„ 1915	..	7,767	„ 1924	..	18,189
„ 1916	..	7,107	„ 1925	..	18,233
„ 1917	..	6,926			
Grand Total			..	..	187,444

The number of ringers has also increased and, including members of societies, over one hundred took part in achieving this remarkable result for 1926. Of these, no less than five individual ringers reached a total of more than one thousand each. Dr. H. J. Moon once again heads the list, and once again beats all previous records with a total of three thousand two hundred and ninety. These included forty-two species, of which the largest numbers were Song-Thrush (644), Sand-Martin (483), Blackbird (391), Lapwing (169), while Tree-Pipit (104), Pied Flycatcher (50), and Wood-Warbler (40) may be also mentioned. Mr. A. Mayall once again comes

* For previous Reports see Vol. III., pp. 179-182, for 1909; Vol. IV., pp. 204-207, for 1910; Vol. V., pp. 158-162, for 1911; Vol. VI., pp. 177-183, for 1912; Vol. VII., pp. 190-195, for 1913; Vol. VIII., pp. 161-168, for 1914; Vol. IX., pp. 222-229, for 1915; Vol. X., pp. 150-156, for 1916; Vol. XI., pp. 272-276, for 1917; Vol. XIII., pp. 96-100, for 1918; Vol. XIII., pp. 237-240, for 1919; Vol. XIV., pp. 203-207, for 1920; Vol. XV., pp. 232-238, for 1921; Vol. XVI., pp. 277-281, for 1922; Vol. XVII., pp. 231-235, for 1923; Vol. XVIII., pp. 260-265, for 1924; Vol. XIX., pp. 275-280, for 1925.

second with over two thousand of thirty species, which include besides large numbers of Blackbirds and Thrushes, House-Martin (381), Swallow (173), and considerable numbers of seven species of Warblers. Mr. A. W. Boyd, who is next on the list with over eighteen hundred, has ringed forty-nine species, his chief totals being Starling (374), Mallard (327), Yellow Bunting (130) and Swallow (117). Lord Scone comes very close to Mr. Boyd with over seventeen hundred of forty-three species, of which I may mention Song-Thrush (418), Starling (289), Woodcock (149), and Wood-Pigeon (51). Mr. R. H. Brown's list totals just over one thousand and includes the greatest number of species, namely fifty-three. Of them may be mentioned, Lapwing (173), Rook (128) and Heron (19). Mrs. L. E. and Mr. W. P. G. Taylor have ringed nearly one thousand of twenty-seven species, almost all Passeres, of which the chief is the Linnet (213). In Mr. F. W. Holder's list the chief figure is the Common Tern (676), achieved with the assistance of the watchers at Ainsdale. Mr. P. A. Morshead has confined his attention chiefly to Passeres, and amongst these I note Brambling (10). Mr. T. L. Smith's list includes Jackdaw (65), and Mr. Bartholomew's Wood-Pigeon (45). Many other lists deserve mention, and it is to be hoped that the large numbers of birds ringed will lead to a valuable series of recovery records.

The remarkable transatlantic journey made by a second Kittiwake from the Farne Islands has already been published (*antea*, pp. 203-4). This striking record was widely referred to in the Press and thus made the ringing scheme more generally known. Although the scheme has been frequently mentioned in the Press on previous occasions, there are still many people who have no idea of the object of ringing, and no doubt a good many ringed birds found are not reported. In this connection, Mr. E. M. Nicholson has devised the plan of a Museum exhibit of ringing. This he has carried out in excellent manner at the Haslemere Museum, and it would no doubt help on the scheme if similar exhibits could be arranged in other centres. Should any of my readers be in a position to make such arrangements with the authorities of Museums, I have Mr. Nicholson's kind permission to give details of his plan, and shall be pleased to transmit them with any other assistance I can give.

As will be seen by the list published in the present issue, a large number of recoveries has been reported. I am glad to note that trapping for ringing purposes is becoming practiced more extensively, notably by Mr. Boyd as well as

by Dr. and Mr. Smith, Mrs. and Mr. Taylor, the Rev. Peake and others. The special work done by Mr. J. F. Thomas with Wheatears, Mr. G. W. Thompson with Kestrels, and Sir Richard Graham with Teal, should also be mentioned as leading to interesting results.

In America the system of trapping has been extensively and systematically used with very valuable results. The ringing scheme in the United States is under the control of the Department of Agriculture and in order to assist us in understanding more about trapping, Mr. F. C. Lincoln, biologist of that Department at Washington, has very generously consented to contribute a practical paper on the subject to *BRITISH BIRDS*. This I hope to receive and publish shortly.

NUMBER OF BIRDS "RINGED."

DR. H. J. MOON (3290), Messrs. A. Mayall (2178), A. W. Boyd (1833), Lord Scone (1738), Messrs. R. H. Brown (1047), W. P. G. Taylor and Mrs. L. E. Taylor (945), Messrs. F. W. Holder (820), P. E. A. Morshead (658), T. L. Smith (612), J. Bartholomew (608), Miss E. C. Sharp (536), Mr. P. K. and Miss J. M. Chance (524), Mr. and Mrs. R. O. Blyth (486), Mr. H. W. Robinson (455), *Lon. Nat. Hist. Soc.* (399), Dr. J. N. D. Smith (398), Messrs. J. F. Thomas (370), R. M. Garnett (352), Miss F. K. Staunton and Miss C. Wingfield (345), Mr. W. S. Jones (*St. Edmund's School Nat. Hist. Soc.*), (337), Lt.-Col. G. P. Pollitt (332), Mr. H. G. Watson (325), Sir R. J. Graham (304), Messrs. K. W. Parkinson (295), J. N. Fletcher (287), B. Clarke (244), J. R. B. Masefield (212), Mrs. T. E. Hodgkin (211), Messrs. H. B. P. Kingham (206), E. R. Paton (187), Rev. E. Peake (172), Major M. Portal (172), Messrs. G. W. Thompson (157), W. and A. B. Duncan (150), *Perthshire Soc. N. Sc.* (144), Dr. A. S. and Mr. E. G. Corbet (141), Messrs. C. W. Walker (135), D. Macdonald (127), T. K. Craven (122), A. H. R. Wilson (112), Miss L. W. Streatfield (107), Messrs. J. H. Methold (90), G. Townsend (72), Miss I. Mayne (71), Mr. C. F. Archibald (65), Miss C. M. Acland (64), Dr. N. H. Joy (64), Mr. E. M. Nicholson (64), Major W. M. Congreve (63), Messrs. F. Howard-Lancum (56), F. J. Mitchell (56), R. G. Willan (53), T. Kerr (50), Mrs. A. Mackenzie (47), Miss J. M. Ferrier (46), Messrs. J. F. Madden (46), W. D. Shaw (44), W. Wood (37), R. P. Gait and C. Tuckett (35), R. Carlyon-Britton (32), Miss B. Wigram (31), The Duke of Northumberland (29), Messrs. R. Groome (20), B. J. Ringrose (20), and others who have ringed under twenty each.

NUMBERS OF EACH SPECIES "RINGED."

	'09-'19	'20	'21	'22	'23	'24	'25	'26	Total
*Crow, Carrion ..	22		16	11	18	59	37	41	204
Rook ..	243	8	17	6	94	24	166	175	733
Jackdaw ..	176	7	29	20	18	36	43	193	522
*Magpie ..	22		4	6	—	33	28	45	138
Jay ..	36	5	2	7	6	20	24	29	129
Starling ..	7018	169	411	454	736	738	866	1967	12359
Greenfinch ..	2792	187	380	386	352	484	478	724	5783
*Goldfinch ..	10		20	12	10	19	5	6	82
Twite ..	42	3	1	—	1	16	—	—	63
Redpoll, Lesser ..	136	3	5	17	12	1	27	15	216
Linnet ..	1301	122	272	377	575	435	560	489	4131
Bullfinch ..	195	40	52	23	63	62	55	94	584
Chaffinch ..	2859	367	521	618	635	764	672	930	7366
Sparrow, House ..	464	2	1	1	2	15	1	3	489
Sparrow, Tree ..	205	20	48	40	32	70	45	58	518
Bunting, Yellow ..	465	41	100	101	144	143	227	286	1507
Bunting, Reed ..	360	39	59	54	39	27	57	33	668
Lark, Sky ..	1778	41	63	64	61	114	44	100	2265
Pipit, Tree ..	214	31	34	42	57	72	60	176	686
Pipit, Meadow ..	1265	22	134	62	61	114	82	102	1842
Wagtail, Yellow ..	106	5	26	19	20	14	44	53	287
Wagtail, Grey ..	114	—	11	25	37	34	58	22	301
Wagtail, Pied ..	721	46	124	112	136	243	252	124	1758
*Creeper, Tree ..	12		24	13	11	4	31	44	139
Tit, Great ..	773	26	31	18	23	20	37	16	944
Tit, Blue ..	663	6	12	32	11	33	33	53	843
Tit, Coal ..	88	15	3	—	1	2	—	—	109
Tit, Long-tailed ..	41	—	—	—	5	1	—	2	49
Wren, G.-crested ..	41	1	1	—	7	22	47	39	158
Shrike, R.-backed ..	150	22	29	11	19	33	43	49	356
Flycatcher, S. ..	795	114	157	72	126	208	215	207	1894
*Flycatcher, Pied ..	6		43	13	1	14	63	72	212
Chiffchaff ..	70	19	68	25	22	50	42	79	375
Warbler, Willow ..	1872	206	284	274	402	436	454	742	4670
Warbler, Wood ..	98	34	71	59	80	86	77	142	647
Warbler, Reed ..	252	31	39	21	23	8	25	17	416
Warbler, Sedge ..	274	30	80	50	57	45	16	20	572
Warbler, Garden ..	126	55	55	42	56	100	52	73	559
Blackcap ..	114	21	32	37	26	25	28	17	300
Whitethroat ..	457	130	179	133	177	138	245	589	2048
Whitethroat, L. ..	141	28	23	19	33	18	12	27	301
Fieldfare ..	85	—	—	—	—	—	—	1	86
Thrush, Mistle ..	628	33	77	103	171	139	185	127	1463
Thrush, Song ..	9718	621	1042	1052	1702	2660	2882	3027	22704
Redwing ..	42	—	3	—	—	1	—	1	47
Ouzel, Ring ..	84	—	3	5	26	7	59	32	216
Blackbird ..	5593	469	918	920	1334	1985	1794	2158	15171
Wheatear ..	192	11	75	155	83	97	103	121	837
Whinchat ..	411	55	17	30	69	49	40	145	816
Stonechat ..	136	—	5	25	56	27	66	33	348
Redstart ..	224	12	135	76	102	58	134	163	904
Nightingale ..	51	19	19	20	19	18	23	33	202
Redbreast ..	2830	299	494	507	865	753	844	735	7327

	'09.	'19	20	'21	'22	'23	'24	'25	'26	Total
Sparrow, Hedge	..	1885	185	246	221	409	463	487	462	4358
Wren	738	76	265	133	321	331	343	213	2420
Dipper	144	8	18	8	19	55	48	55	355
Swallow	7290	307	382	821	889	1055	1173	1328	13245
Martin	1784	87	144	245	296	900	959	849	5264
Martin, Sand	..	746	52	37	18	159	234	271	743	2260
*Swift	6		27	72	37	87	57	59	345
Nightjar	49	6	7	5	10	7	4	7	95
Wryneck	195	17	8	8	2	20	13	28	291
Cuckoo	117	7	20	16	22	20	23	30	255
*Owl, Little	..	10		12	6	11	26	38	30	133
Owl, Long-eared	..	30	2	10	12	7	—	12	3	76
Owl, Barn..	..	76	5	14	2	13	5	15	19	149
Owl, Tawny	..	117	8	15	14	14	18	52	35	273
*Merlin	16		1	6	4	9	22	25	83
Kestrel	55	4	12	3	20	28	63	93	278
*Buzzard	2		11	3	2	8	12	6	44
Hawk, Sparrow	..	62	5	4	9	19	21	26	19	165
Heron, Common	..	111	—	—	6	14	21	38	19	209
Sheld-Duck	..	50	21	1	—	4	—	6	1	83
Mallard	644	1	41	58	180	281	127	477	1809
Teal	129	20	—	1	—	135	148	313	746
Wigeon	79	23	1	15	—	3	1	—	122
Duck, Tufted	..	65	—	—	4	1	—	—	—	70
Cormorant	..	563	—	—	—	—	8	—	23	594
Shag	166	—	—	—	46	20	5	81	318
Gannet	198	—	—	26	119	425	—	100	868
Shearwater, Manx	..	69	3	—	—	9	13	3	2	99
Wood-Pigeon	..	193	19	33	26	61	181	184	202	899
Dove, Stock	..	51	6	26	7	15	19	16	35	175
Dove, Turtle	..	76	5	9	12	13	19	35	84	253
Oystercatcher	..	100	4	5	7	20	70	41	61	308
Plover, Ringed	..	143	19	39	19	47	75	39	22	403
Plover, Golden	..	49	—	4	1	2	5	12	1	74
Lapwing	4033	125	220	345	358	597	778	1136	7592
Sandpiper, C.	..	208	13	10	24	37	44	34	40	410
Redshank	298	13	25	26	32	39	46	78	557
Curlew, Common..	..	214	14	36	67	58	110	59	109	667
Snipe, Common	..	214	6	19	18	8	50	31	40	386
Woodcock..	..	348	17	8	31	28	57	84	273	846
Tern, Sandwich	..	731	31	30	77	153	92	421	148	1683
Tern, Common	..	3854	144	706	2	44	425	632	882	6689
Tern, Arctic	..	105	25	24	2	1	9	15	18	199
Tern, Little	..	175	9	—	9	1	29	25	3	251
Gull, B.-headed	..	11961	—	5	—	—	3	—	11	11980
Gull, Common	..	5514	—	—	26	36	59	16	28	679
Gull, Herring	..	512	—	6	9	20	43	19	146	755
Gull, L. Blk.-bkd..	..	2698	471	197	455	120	565	197	101	4804
Gull, G. Blk.-bkd..	..	78	—	—	2	3	33	35	28	179
Kittiwake	..	84	—	—	43	86	15	—	15	243
Razorbill	64	5	—	18	42	95	8	17	249
*Guillemot	23	—	—	106	255	563	—	1	948
Puffin	905	—	—	8	45	19	2	21	1000
Moor-Hen	298	20	12	33	25	43	58	67	556

* Of species so marked no record was kept of the number ringed from 1913 to 1920.

SOME PERCENTAGES OF RECOVERIES.

Species.	Number Ringed 1909-25.	Number of these Recovered to date.	Percentages of Recoveries
Rook ...	558	17	3.04
Starling ...	10,392	528	5.08
Greenfinch ...	5,059	71	1.4
Linnet ...	3,642	26	0.7
Chaffinch ...	6,436	88	1.3
Yellow Bunting ...	1,221	46	3.7
Reed-Bunting ...	635	2	0.3
Sky-Lark ...	2,165	19	0.8
Tree-Pipit ...	510	2	0.3
Meadow-Pipit ...	1,740	21	1.2
Pied Wagtail ...	1,634	29	1.7
Spotted Flycatcher ...	1,687	5	0.2
Willow-Warbler ...	3,928	22	0.5
Whitethroat ...	1,459	5	0.3
Mistle-Thrush ...	1,336	24	1.7
Song-Thrush ...	19,677	242	1.2
Blackbird ...	13,013	308	2.4
Wheatear ...	716	14	1.9
Whinchat ...	671	6	0.8
Redstart ...	741	2	0.2
Redbreast ...	6,592	268	4.06
Hedge-Sparrow ...	3,896	15	0.3
Swallow ...	11,917	86	0.7
Martin ...	4,415	33	0.7
Sand-Martin ...	1,517	6	0.3
Swift ...	286	10	3.4
Cuckoo ...	225	7	3.1
Tawny Owl ...	238	16	6.7
Kestrel ...	185	15	8.1
Sparrow-Hawk ...	146	27	18.4
Heron ...	190	24	12.6
Mallard ...	1,332	236	17.7
Teal ...	433	41	9.4
Cormorant ...	571	100	17.5
Shag ...	237	28	11.7
Gannet ...	768	26	3.3
Wood-Pigeon ...	697	28	4.01
Ringed Plover ...	381	4	1.04
Lapwing ...	6,456	192	2.9
Common Sandpiper ...	370	2	0.5
Redshank ...	479	24	5.03
Curlew ...	558	22	3.9
Snipe ...	346	29	8.3
Woodcock ...	573	62	10.8
Sandwich Tern ...	1,535	14	0.9
Common Tern ...	5,807	104	1.7
Black-headed Gull ...	11,969	526	4.3
Common Gull ...	651	17	2.6
Herring-Gull ...	609	20	3.2
Lesser Black-backed Gull ...	4,703	187	3.9
Guillemot ...	947	16	1.6
Puffin ...	979	1	0.1

RECOVERY OF MARKED BIRDS.

No.	Place and Date Ringed:	Place and Date Reported.
STARLING (<i>Sturnus v. vulgaris</i>).		
X.3336	Broughty Ferry (Forfar), 22.1.26, ad., by T. L. Smith.	Where ringed, 12.2.26, by ringer; again released. Feryden, Montrose (25 miles away), early May, 1926, breeding, by S. Nicoll.
Y.3370	Ditto 22.12.25.	Where ringed June, 1926, by A. McIntosh.
Z.1137	Ditto 26.10.24. by J. N. D. and T. L. Smith.	Where ringed, 8.7.26.
Y.6968	Scone Estate (Perth), 23.2.26, ad., by Lord Scone.	Where ringed, 14.3.26 and 15.10.26, by ringer; again released.
B.5198	Torrance (Stirling), 26.5.24, young, by J. Bartholomew.	Where ringed, 18.5.26, by ringer.
X.3243	Carlisle (Cumberland), 2.2.26, ad., by J. N. D. Smith.	Belsay Castle, nr. Newcastle, 16.4.26, by L. M. Middleton.
Y.6059	Dalston (Cumberland), 16.5.25, nestling, by R. H. Brown.	Cumdivock (Cumberland), 1.5.26, by R. Scales.
Z.5045	Cumdivock (Cumberland), 21.5.24, nestling, by R. H. Brown.	Thursby (near Carlisle), 20.5.26, by R. Blamire.
76790	Ullswater (Cumberland), June, 1926, young, by H. J. Moon.	Cavan (N. Ireland), 14.10.26, by D. Kelly.
Y.2520	Prestwich (Lancs.), 5.12.25, ad., by G. Townsend.	Ulceby (Lincs.), May, 1926, by J. H. J. Webb.
X.1610	Near Gt. Budworth (Ches.), 5.12.25, ad., by A. W. Boyd.	Where ringed, 19.6.26, by ringer.
X.1612	Ditto. 4.12.25.	Grüneberg, Brandenburg, Prussia, 19.5.26, by W. Przy- goda, per J. Thienemann.
X.1750	Ditto 13.12.25.	Manchester (Lancs.), 13.1.26, by E. P. Enderlein.
X.2471	Ditto 18.1.26.	Pomerania, May, 1926 (nest- ing), by C. Runge, per J. Thienemann.
54982	Ditto 18.2.23.	Where ringed, 4.12.25, by ringer; re-ringed X.1619.
Z.9339	Bluntisham (Hunts.), 27.1.25, ad., by E. Peake.	Where ringed, 18.3.25 and 6.2.26, by ringer; again released.
54432	Ditto 26.5.24.	Chesterton (Cambs.), 3.10.26, by A. Roper.
59432	Ditto 26.5.24.	Where ringed, April, 1926, by ringer.
X.3635	Warwick Park (Warwick), 20.5.26, nestling, by P. K. Chance.	Near High Wycombe (Bucks.), 11.7.26, by W. Jennings.
Z.1421	Eton (Bucks.), 24.8.23, young, by A. Mayall.	Braintree (Essex), 8.11.26, by W. B. Martin.

No. Place and Date Ringed. Place and Date Reported.

JACKDAW (*Colæus m. spermologus*).

73718	Near Gt. Budworth (Ches.), 17.10.25, by A. W. Boyd. Seaford (Sussex), 7.6.23, ad., by J. F. Thomas.	Where ringed, 28.6.26, by ringer; again released. Seaford, 14.6.26, by D. S. L. Shilcock.
73719		
69480		

GREENFINCH (*Chloris ch. chloris*).

B.7678	Near Gt. Budworth (Ches.), 12.8.25, ad., by A. W. Boyd.	Where ringed, 4.5.26, by ringer; again released.
D.3233	Ditto 3.11.25.	Ditto 13.1.26 and 15.5.26.
D.3278	Ditto 13.12.25.	Ditto 4.5.26.
D.3286	Ditto 16.12.25.	Ditto 12 and 15.1.26; 6.5.26.
C.2223	Malvern (Worcs.), 8.3.25, ad., by P. E. A. Morshead.	Ditto 17.3.26.

CHAFFINCH (*Fringilla c. cælebs*).

B.9051	Near Gt. Budworth (Ches.), 9.2.25, ad., by A. W. Boyd.	Where ringed, 16.5.26, by ringer; again released.
D.3301	Ditto 28.12.25.	Ditto 15.6.26
B.2584	Pyrford (Surrey), 11.3.24, ad., by Mrs. L. E. Taylor.	Where ringed, 11.3.26, by ringer.

YELLOW BUNTING (*Emberiza c. citrinella*).

A.2027	Near Gt. Budworth (Ches.), 26.2.23, ad., by A. W. Boyd.	Where ringed, 6.7.26, by ringer; again released.
A.2036	Ditto 2.3.23.	Ditto 25.2.25; 12.6.26; 20.6.26.
B.9113	Ditto 26.2.25.	Ditto 15.5.26; 25.6.26.
B.9175	Ditto 10.3.25.	Ditto 5.7.25; 10.7.26.
C.5766	Ditto 13.7.25.	Ditto 6.7.26.
D.3275	Ditto 12.12.25.	Ditto 12.6.26.
D.3293	Ditto 16.12.25.	Ditto 13.6.26.
D.3311	Ditto 5.1.26.	Ditto 6.5.26; re-ringed D.5099.
D.5040	Ditto 25.2.26.	Half a mile away, 25.6.26, by Mr. Millington.

WILLOW-WARBLER (*Phylloscopus t. trochilus*).

D.1867	Ullswater (Cumberland), June, 1925, young, by H. J. Moon.	Blackpool (Lancs.), mid-May, 1926, by E. H. Jones.
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No.	Place and Date Ringed.	Place and Date Reported.
SONG-THRUSH (<i>Turdus ph. clarkei</i>).		
Z.1117	Broughty Ferry (Forfar), 29.5.24, nestling, by J. N. D. and T. L. Smith.	Balgay Hill, about 7 miles away, 23.5.26, by J. Mac- farlane.
C.7553	Torrance (Stirling), 26.5.25, young, by J. Bartholomew.	Where ringed, June, 1926, by ringer.
Y.5986	Dalston (Cumberland), 3.5.25, nestling, by R. H. Brown.	Tralee (Kerry), Ireland, 6.1.26, by W. Quinnell.
Y.1955	Formby (Lancs.), 15.11.25, ad., by T. L. S. Dooly.	Where ringed, 22.5.26, by ringer.
57721	Near Gt. Budworth (Ches.), 29.2.24, ad., by A. W. Boyd.	Where ringed, 3.6.25, by ringer; again released.
Z.3655	Near Stoneleigh (Warwick), 11.4.25, nestling, by F. Dipple.	Near Hook Tower Lighthouse, Fethard (Waterford), late Nov., 1925, by M. McMahon.
Y.4098	Burnham (Bucks.), 27.4.25, nestling, by A. Mayall.	Near Wadebridge (Cornwall), 1.2.26, by F. Craddock.
Y.4275	Ditto 9.5.25.	Near Slough (Bucks.), late Jan., 1926, by C. Hester.
58339	Enfield (Middx.), 13.3.25, ad., by S. G. Pooock.	Where ringed, 26.11.25, by ringer; again released.
Z.2432	Pyrford (Surrey), 7.4.24, ad., by W. P. G. Taylor.	Where ringed, 6.7.26.

BLACKBIRD (*Turdus m. merula*).

Y.3322	Broughty Ferry (Forfar), 21.11.25, juv., by T. L. Smith.	Lochee, Dundee (Forfar), 8.3.26, by J. B. Crammond.
MZ.52	Torrance (Stirling), 14.6.20, nestl., by J. Bartholomew.	Where ringed, 11.3.26, by ringer.
A.5763	Torrance, 20.6.23, young, by J. Bartholomew.	Ditto about 1.7.26.
C.7582	Torrance, 3.6.25, young, by J. Bartholomew.	Street (West Meath), Ire- land, March, 1926, by W. L. McCulloch.
Y.4809	Ullswater (Cumberland), May, 1925, young, by H. J. Moon.	Windermere (Westmorland), 29.4.26, by C. T. Phillips.
56234	Formby (Lancs.), 22.5.24, nestling, by T. L. S. Dooly.	Where ringed, 22.4.26, by R. Aindow.
Z.9155	Wistaston (Ches.), 13.7.24, young, by Miss E. K. I. Mayne.	Crewe (Ches.), 25.8.26, by Miss F. J. Day.
Z.2272	Prestbury (Ches.), 23.5.24, nestling, by R. M. Garnett.	Where ringed, 12.5.26, by ringer.
Y.6180	Malvern (Worcs.), 12.6.25, nestl., by P. E. A. Morshead.	Gt. Malvern, Feb., 1926, by H. O. Summers.
Z.3586	Ditto 3.6.24, ad.	Where ringed, 4.6.25 and 17.5.26, by ringer.
Y.7117	Burnham (Bucks.), 9.5.25, nestling, by A. Mayall.	Where ringed, 15.12.25, by J. Savin.
55228	Maidstone (Kent), 8.6.23, nestling, by W. Wood.	Same place, 27.6.26, by Miss W. Parker.

No.	Place and Date Ringed.	Place and Date Reported.
WHEATEAR (<i>Enanthe æ. ænanthe</i>).		
B.7412	Seaford (Sussex), 24.5.25, nestling, by J. F. Thomas.	Two miles away, 26.6.26, by ringer; breeding; again released.
B.7414	Ditto breeding female.	Nesting $\frac{1}{2}$ mile away, 25.5.26, by ringer.
B.7443	Ditto 2.6.25, nestling.	Ditto ditto.
B.2509	Ditto 19.5.24, breeding female.	Ditto 23.5.26, a mile away.
D.4920	Ditto 4.5.26 ditto.	Ditto 30.5.26, 40 yards away.

REDSTART (*Phœnicurus ph. phœnicurus*).

E.6162	Near Ambleside (Westmorland), 23.6.26, nestling, by P. K. Chance.	Kendal, 9 miles from where ringed, about 19.8.26, by J. Pattinson.
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REDBREAST (*Erithacus rubecula*).

C.1780	Wistaston (Ches.), 24.11.25, ad., by Miss I. Mayne.	Where ringed, 22.3.26, by ringer.
C.2348	Prestbury (Ches.), 15.2.25, ad., by R. M. Garnett.	Ditto 25.12.25, again released.
B.3937	Malvern (Worcs.), 1.2.25, ad., by P. E. A. Morshead.	Ditto 8.2.25; 10 and 13.5.25; and 17.5.26.
B.8103	Bluntisham (Hunts.), 3.3.25, ad., by E. Peake.	Ditto 8.12.25.
B.8112	Ditto ditto.	Ditto 10.12.25; 20.1.26.
8635	Ditto 21.1.25.	Ditto 13.4.25; 8.5.25; 2.2.26.
A.1539	Godstone (Surrey), 10.7.24, by J. F. Madden.	Near where ringed, Dec., 1925, by ringer.
C.6708	Pyrford (Surrey), 24.5.25, nestling, by Mrs. L. E. Taylor.	Where ringed, 15.7.26, by ringer; again released.

HEDGE-SPARROW (*Prunella modularis*).

C.6153	Prestbury (Ches.), 1.9.25, ad., by R. M. Garnett.	Where ringed, 27.2.26, by ringer.
D.3219	Near Gt. Budworth (Ches.), 2.10.25, ad., by A. W. Boyd.	Where ringed, 12.11.25; 31.1.26; 13.5.26; re-ringed D.5117.
A.2053	Ditto 12.3.23.	Where ringed, 19.3.23; four times between Nov., 1924 and Jan., 1925; twice Dec., 1925; 17.4.26; 5.5.26; twice Jan., 1927.
C.6577	Ditto 2.9.25	Where ringed, 26.6.26.
C.9530	Flawboro' (Notts.), 6.5.25, young, by F. Cragg for Miss F. K. Staunton.	Where ringed, 21.4.26, by ringer.
QZ.4	Pyrford (Surrey), 30.10.25, ad., by Mrs. L. E. Taylor.	Where ringed, 11.3.26.

No. Place and Date Ringed. Place and Date Reported.

SWALLOW (*Hirundo r. rustica*).

- F.345 Swordale (Ross), 5.7.11., Drumchapel (Stirling), July,
nestling, by Miss A. C. 1920, by Miss J. Black.
Jackson. (Previous publication omitted.)
- E.5751 Torrance (Stirling), 21.6.26, Kilsyth, 8 miles away, 25.8.26,
young, by J. Bartholomew. by Miss C. Taylor.
- B.3588 Near Gt. Budworth (Ches.), Near Sandbach (Ches.), 5.5.26,
8.8.24, nestling, by A. W. by H. Richardson.
Boyd.
- B.3992 Near Coventry (Warwick), Warwick Park, early June,
13.6.25, nestling, by F. 1926, by P. K. Chance.
Dipple.
- C.8506 Laugharne (Carmarthen), St. Austell (Cornwall), 13.5.26,
31.7.25, nestling, by J. F. by W. G. May.
Thomas.
- C.8540 Ditto 7.8.25. A mile away, 17.5.26, by T. J.
Howell; again released.
- C.7476 Weyhill (Hants.), 10.6.25, Near Basingstoke (Hants.),
young, by R. Groome. 21.7.26, by Miss E. Heward.

MARTIN (*Delichon u. urbica*).

- C.8308 Glen Esk (Forfar), 17.7.25, Where ringed, June, 1926,
young, by H. G. Watson. by ringer; again released.
- A.7876 Burnham (Bucks.), 21.6.23, Wooburn Green (Bucks.),
ad., by A. Mayall. 30.6.26, by Mrs. A. Muir.

SWIFT (*Apus a. apus*).

- C.6285 } Near Leamington (Warwick), Where ringed, 11.6.26, by
C.6296 } 13.7.25, ad., by P. K. ringer.
Chance.
- A.2406 Forant (Wilts.), 4.7.22, ad., Where ringed, 10.5.26.
by K. C. Clay.

LITTLE OWL (*Athene n. vidalii*).

- 76060 Barton (Cambs.), 20.4.25, ad., Same nesting hole, 25.4.26,
by G. W. Thompson. by ringer.
- 26348 Caerwent (Mon.), 5.7.25, Wick (Glamorgan), 8.1.26,
nestling, by Miss C. M. by D. Francis.
Acland.

TAWNY OWL (*Strix a. sylvatica*).

- 9657 Ulverston (Lancs.), 3.7.25, Near Ulverston, 20.5.26, by
nestling, by C. F. Archi- J. Bevins.
bald.

BARN-OWL (*Tyto a. alba*).

- 22822 Lode Fen (Cambs.), 27.7.25, Near Ely (Cambs.), early
young, by G. W. Thomp- Jan., 1926, by P. Bradshaw.
son.
- 21773 Bluntisham (Hunts.), 31.10.25, Near where ringed, end July,
nestling, by E. Peake. 1926 by W. Farren.

No. Place and Date Ringed. Place and Date Reported.

MERLIN (*Falco c. aesalon*).

- 75343 Gairloch (Ross), 25.6.24, Nestling, by Lord Scone. Near where ringed, 3.5.26, by S. Mackenzie.
 74729 Hareshawmuir (Ayr.), Linlithgow (W. Lothian), 14.7.25, young, by E. R. April, 1926, by N. Mc-Paton. Lachlan.
 26343 Kenfig (Glamorgan), 24.6.23, Nestling, by Miss C. M. Nantfyllon, 7 miles away, Acland. 29.6.26, by W. Jenkins.

KESTREL (*Falco t. tinnunculus*).

- 77615 Logiealmond Lodge (Perth), Damhead, Symington (Ayr), 6.6.26, nestling, by J. Dun- Oct., 1926, by Miss C. McC-can for Lord Scone. Muir.
 77617 Ditto ditto. Amubree, Dunkeld, 10 miles away, 23.6.26, by R. S. Rowat.
 77618 Ditto ditto. Near Comrie, 20 miles away, 4.8.26, by W. A. Dewhurst.
 25941 Kirkconnel (Dumfries), Near Garstang (Lancs.), 26.6.25, young, by T. K. 21.2.26, by R. Cookson. Craven.
 79134 Ditto 10.7.26, nestling. Near Inveraray (Argyll), 27.10.26, by J. MacLean.
 76059 Barton (Cambs.), 28.5.25, Where ringed, early June, ad., by G. W. Thompson. 1926, by ringer.
 77479 Ditto 7.6.25, nestling. 1½ miles away, 18.5.26, by ringer; again released.
 76070 Ditto 3.7.25, young. Near Christchurch (Hants.), 5.10.25, by J. Pearce.
 78196 Ditto 3.6.26, young. Edenbridge (Kent), 22.11.26, by Brig.-General Buzzard.
 79097 Haslingfield (Cambs.), 10.6.26, Sporle, Swaffham (Norfolk), nestling, by G. W. Thomp- 9.8.26, by T. S. Matthews. son.

HERON (*Ardea c. cinera*).

- 104045 Floriston (Cumberland), Kingussie (Inverness.), July, 8.5.26, nestling, by R. H. 1926, by J. Ness. Brown.

MALLARD (*Anas p. platyrhynchos*).

- 26072 } Almondbank (Perth), 28.8.26, Near where ringed, 9.11.26,
 26076 } young, by H. Zimmerman by ringer.
 for Lord Scone.
 26087 } Ditto 10.7.26. Ditto ditto.
 26096 }
 27475 Ditto 6.8.26. Ditto 18.11.26.
 20516 Leswalt (Wigtown), 6.3.24, Aurich, Hanover (Prussia), ad., by M. Portal. 25.3.26, by G. F. Kittel.
 23642 Near Gainsborough (Lincs.), Motala, Östergothland 3.7.24, young, by F. Mey- (Sweden), 26.8.26, by nell. G. G. Vederberg.

No.	Place and Date Ringed.	Place and Date Reported.
TEAL (<i>Anas c. crecca</i>).		
71534	Longtown (Cumberland), 31.3.23, ad., by W. Bell for Sir R. J. Graham.	Rosersberg, near Stockholm (Sweden), 1.8.26, by E. Lönnerberg.
76146	Longtown, 3.3.25, hand- reared, by Sir R. J. Gra- ham.	Near Harwich (Essex), 23.10.26, by F. L. Smith.
76148	Ditto ditto.	Falster Island (Denmark), 3.8.26, by E. Frellesvig.
76161	Ditto ditto.	Near Rauland (Norway), 9.5.26, by A. Göytil and A. Bernhoft-Osa.
78432	Ditto 12.1.26.	Torne River (Lapland), end July, 1926, by E. Lönnerberg.
78514	Ditto 5.3.26.	Lake Mälaren, 32 miles N.W. of Stockholm (Sweden), 21.9.26, by E. Lönnerberg.
78515	Ditto 9.3.26.	Lake 56 miles S. of Stettin, Brandenburg (Prussia), 26.8.26, by Count of Vöss- Dölzig.

CORMORANT (*Phalacrocorax c. carbo*).

104257	Badcall Islands (Sutherland), 17.6.26, nestling, by Miss E. C. Sharp.	Roughrigg Reservoir, Shotts (Lanark), 23.10.26, by Airdrie Water Board.
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SHAG (*Phalacrocorax a. aristotelis*).

102840	Handa (Sutherland), 25.6.23, ad., by A. W. Boyd.	Where ringed, 18.6.26, by Miss E. C. Sharp; again released.
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GANNET (*Sula bassana*).

103586	Ailsa Craig, Firth of Clyde, 19.7.24, young, by D. Macdonald.	20 miles N.W. of Muckle Flogga (Shetland), 9.6.26, by L. Laurenson.
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WOOD-PIGEON (*Columba p. palumbus*).

73874	Near Gt. Budworth (Ches.), 5.7.24, nestling, by A. W. Boyd.	Antrobus, 1½ miles away, 17.7.26, by Mr. Harrison.
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TURTLE-DOVE (*Streptopelia t. turtur*).

72945	Near Gt. Budworth (Ches.), 19.8.24, ad., by A.W. Boyd.	Near where ringed, 8.7.25; 9.6.26, by ringer; again released.
72947	Ditto 27.8.24.	Where ringed, 20.5.26, by ringer; again released.
73708	Ditto 8.7.25.	Ditto 26.6.26; re-ringed No. 73740 and re-captured 2.8.26.
73710	Ditto 8.7.25.	Where ringed, 9.7.26.

No. Place and Date Ringed. Place and Date Reported.

LAPWING (*Vanellus vanellus*).

- | | | |
|--------|---|---|
| Z.7714 | Glen Fruin (Dumbarton),
22.6.24, young, by T. Kerr. | Pallasgreen (Limerick, Ire-
land), 25.10.26, by T.
Wheeler. |
| 51326 | Near Kilmacolm (Renfrew),
23.6.22, young, by Mr. and
Mrs. R. O. Blyth. | Ballyhaunis (Mayo, Ireland),
7.12.26, by M. Grogan. |
| Y.6048 | Burgh Marsh (Cumberland),
13.5.25, nestling, by R. H.
Brown. | Begadan (Médoc, France),
25.2.26, by G. Lussaud. |
| Y.8813 | Near Green Quarries (Cum-
berland), 28.5.25, nestling,
by R. H. Brown. | Maryport (Cumberland),
22.6.26, by I. Nicholson. |
| Z.3241 | Near Butcombe (Somerset),
25.5.24, young, by C. Tuc-
kett and R. P. Gait. | Blagdon (Somerset), Feb.,
1926, by C. Sainsbury. |

REDSHANK (*Tringa t. totanus*).

- | | | |
|--------|--|--|
| X.9342 | Burgh Marsh (Cumberland),
28.5.26, nestling, by R. H.
Brown. | Eastriggs (Dumfries), July,
1926, by W. F. McGlasson. |
|--------|--|--|

CURLEW (*Numenius a. arquata*).

- | | | |
|-------|--|--|
| 66200 | Ulverston (Lancs.), 30.5.24,
young, by C. F. Archibald. | Dunmore (Galway, Ireland),
Feb., 1926, by <i>The Shooting
Times</i> . |
|-------|--|--|

WOODCOCK (*Scolopax r. rusticola*).

- | | | |
|--------|--|---|
| X.4551 | Glendelvine Estate (Perth),
15.6.26, nestling, by W.
McLaren for Lord Scone. | Two miles from where ringed,
10.9.26, by W. O. Horne. |
| X.9212 | Kinloch, Meigle (Perth),
11.6.26, by C. W. Walker. | One mile from where ringed,
18.9.26, by ringer. |
| X.6946 | Ditto 9.5.26. | Ditto 20.10.26. |
| X.6486 | Hamsterley (Durham), | Two miles from where ringed, |
| X.6499 | 30.5.26, young, same
brood, by Col. Pollitt. | 10.9.26, by ringer. |
| X.6484 | Ditto 27.6.26. | Ditto 11.9.26. |
| Z.3097 | Holker, Cark-in-Cartmel
(Lancs.), May, 1925, young,
by Col. Porritt. | Near Kendal (Westmorland),
20.11.26, by H. D. Wilson. |
| 2854 | Balmaclellan (Kirkcud-
brightshire), summer, 1914,
young, by R. Shepley | Moniaive (Dumfries), 30.11.26,
by C. Dubs, per H. S.
Gladstone. |

HERRING-GULL (*Larus a. argentatus*).

- | | | |
|-------|--|--|
| 24713 | Near Auchmithie (Forfar),
30.6.25, young, by H. G.
Watson. | Loon-Plage (Nord, France),
17.5.26, by Docteur Top. |
|-------|--|--|

No.	Place and Date Ringed.	Place and Date Reported.
LESSER BLACK-BACKED GULL (<i>Larus f. affinis</i>).		
26236	Bowness Moss (Cumberland), 14.7.25, young, by R. H. Brown.	Near Lisbon (Portugal), 29.11.26, by D. Whiting, per <i>Daily Mail</i> .
39788	Foulshaw (Westmorland), 30.7.21, young, by H. W. Robinson.	Near Sundside (Westmorland), Aug., 1926, by D. Gray.

RAZORBILL (*Alca torda*).

71366	Handa (Sutherland), 25.6.23, ad., by A. W. Boyd.	Where ringed, 18.6.26, by Miss E. C. Sharp.
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BIRDS MARKED ABROAD AND RECOVERED IN GREAT BRITAIN.

- STARLING (*Sturnus v. vulgaris*).—Zool. Stat., Helgoland, 502,222, ringed at Israelsdorf, near Lubeck, Holstein, west Germany, on May 26th, 1926. Reported at Boxley, near Maidstone, Kent, on October 29th, 1926, by Mr. G. Tomsett, per the *Daily Mail*.
- REDWING (*Turdus musicus*).—Zool. Stat., Helgoland, 53676, ringed in Heligoland on April 14th, 1924. Reported near Norwich, Norfolk, on February 3rd, 1927, by Dr. S. H. Long.
- HERON (*Ardea c. cinerea*).—I.R.A., Versailles, France, 0/14, ringed in the Heronry in Forest of Rioult-Clairmarais, Pas-de-Calais, France, as a nestling, on April 28th, 1926. Reported at Laverstoke Park, on River Test, Hants, on November 8th, 1926, by Major M. Portal.
- TEAL (*Anas c. crecca*).—Leningrad, Lesnov Institut, D.523, ringed on Luberetzkoie Lake for water-fowl, 10 miles east of Novgorod (100 miles south of Petrograd), Russia, on July 25th, 1926. Reported at Bowthorpe, 4 miles from Norwich, Norfolk, on November 9th, 1926, by Mr. E. A. Curl.
- GOLDEN PLOVER (*Charadrius apricarius*).—P. Skovgaard, Viborg, Danmark, X.2728, ringed on Hraunsland S. Pinvollasysla, Denmark, on June 27th, 1926. Reported in King's Co., Ireland, November 11th, 1926, per Mr. J. Bartholomew. (See *Shooting Times*, November 13th, 1926.)
- COMMON GULL (*Larus c. canus*).—P. Skovgaard, Viborg, Danmark, X.5971, ringed at Dybsii, south of Sjælland, Denmark, on June 30th, 1925. Reported at Burnham-on-Crouch, Essex, end of December, 1926, by Mr. H. Becher.

NOTES

THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

THE following data were obtained during 1926, in addition to those concerning the House-Martin and Common Tern already published (*antea*, pp. 130 and 131).

	Incubation- Period, Days.	Fledging- Period, Days.
Magpie (<i>Pica p. pica</i>)	17-18, —	22-23, 24
Goldfinch (<i>Carduelis c. britannica</i>) ..	12	—
Chaffinch (<i>Fringilla c. cœlebs</i>) ..	13	13
Pied Wagtail (<i>Motacilla a. yarrellii</i>) ..	—, —	15, 15
Tree-Creeper (<i>Certhia f. brittanica</i>) ..	—	14
Spotted Flycatcher (<i>Muscicapa s. striata</i>)	12, 15	15, 13
Robin (<i>Erithacus r. melophilus</i>) ..	14	12
Dipper (<i>Cinclus c. gularis</i>) ..	15-16	19-20
Swallow (<i>Hirundo r. rustica</i>) ..	14, 14, 14	20, 22, 21

R. H. BROWN.

CURIOUS ACTION OF A NESTLING WHITETHROAT.

ON July 20th, 1926, I found on the ground a fledged young Whitethroat (*Sylvia c. communis*). The parent bird was uttering its harsh alarm note from a neighbouring bush. The young bird stayed in the same spot and gradually raised its head over its back until the beak almost touched the tail, when the bird lost its balance and fell over. Thinking there might be something wrong with it, I retired to a distance to watch, and saw the old bird come out and feed the young one, when it became quite normal and moved along the ground a short way with the old bird. To make a further test I showed myself again and the parent bird uttered its alarm note, whereupon the young bird stood still and went through the same performance as before. I may add that the movement was executed very slowly and apparently deliberately.

C. W. COLTHRUP.

LARGE COLONY OF HOUSE-SPARROWS IN ONE TREE.—Mr. G. B. Westcott sends us a photograph of a pear-tree near Altringham, Cheshire, that was taken possession of by a colony of House-Sparrows (*Passer d. domesticus*) in 1926. The photograph is not clear enough for reproduction, but the tree is not a large one and Mr. Westcott states that it held seventeen nests.

WILLOW-TITS IN LANARKSHIRE.—Mr. Walter Stewart contributes an interesting article to the *Scottish Naturalist* (1926, pp. 147-150) on the distribution, appearance, habitat and nesting of the Willow-Tit (*Parus atricapillus kleinschmidti*) in Lanarkshire. In certain parts of this county the bird seems plentiful, more so than in any other part of Scotland according to the author. It particularly affects valleys in the bottoms of which the ground is somewhat waterlogged, with a rank, dense undergrowth in summer. Here it nests in the stumps of decayed alders and willows, and about 90 per cent. of the nests are in holes bored by the birds themselves, and in nearly every case the chips are removed to at least a short distance. Among the localities outside Lanark in which Mr. Stewart has identified the bird, he mentions near Kincardine O'Neil in south Aberdeenshire, a part from which we are not aware of any previous record.

RED-SPOTTED BLUETHROAT IN EDINBURGH.—Prof. R. A. Sampson records (*Scot. Nat.*, 1926, p. 160) that a Bluethroat (*Luscinia svecica*) was seen in the grounds of the Royal Observatory, Edinburgh, from about the month of August to September 7th, 1926. The Bluethroat has only once before been recorded from the *mainland* of Scotland in autumn.

COMMON POCHARD BREEDING IN MIDLOTHIAN, AYRSHIRE AND RENFREWSHIRE.—Messrs. D. Hamilton and J. K. Nash have proved the breeding, in 1926, of *Nyroca f. ferina* on Doddington Loch, where two broods were seen in play (*Scot. Nat.*, 1926, p. 130). Adult birds have been observed there in recent springs, but actual breeding in the county seems not to have been previously proved. In the same journal (p. 131), Mr. E. Richmond Paton states that he saw broods of this duck in the summer of 1926 in Ayrshire and in Renfrewshire, where it seems not to have been recorded as breeding before, though a record belonging to Dumbartonshire was first erroneously ascribed to Renfrewshire.

GOOSANDER NESTING IN DUMFRIESSHIRE.—Mr. H. S. Gladstone records (*Scot. Nat.*, 1926, p. 140) that a gamekeeper informed him that he frequently saw two pairs of Goosanders (*Mergus m. merganser*) on the River Annan in April and May, 1926, and that on July 17th he saw one female with six young and at an earlier date the other female with ten young. On September 4th the keeper shot a young male Goosander and sent it to Mr. Gladstone by way of confirmation. In his *Birds of Dumfriesshire*, Mr. Gladstone did not accept a previous record of breeding about thirty years ago as substantiated. Proof of breeding so far to the south in Scotland is interesting.



LETTERS



ON THE EFFECTS OF EXTREME COLD ON BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—May I add a few words to my comments on the effects of extreme cold on birds in a previous issue of *British Birds* (Vol. XVIII., pp. 296-9, April, 1925). The first half of the present winter (to the end of December, 1926) has been the severest on record since a meteorological station was established here in 1914. Although the temperature has never exceeded 35° below zero (Fahr.) we have had long spells of below zero weather, while on December 11th we experienced what is reputed to have been the worst blizzard in twenty years. In addition to my old aviaries I now have a considerably larger one (about 170 square feet in area) built on the same general principle but with various improvements. A slight alteration to the old ones has proved beneficial, for during the great blizzard only three or four birds in these got frozen feet, none at all in the new. This has been the only case of frozen feet this winter. Since it occurred again during a blizzard, it may be assumed that the condition is due to a blending of gale, snowfall and low temperature. (I had nearly 200 birds in the combined aviaries.)

As to the icing of the head and back, this has been very frequent and has been practically confined to the birds in the new aviary. In the sheltered portion of the roof there runs a ledge lengthwise, on to which the Juncos (*Junco hyemalis*) have developed a habit of crowding at nights, no doubt for warmth. Whenever the thermometer drops to about 15° below zero or worse, a large percentage of the birds are ice-covered in the morning. All vestiges of it disappear during the day, so that this is no doubt due, as previously surmised, to sleeping in confined quarters during intense cold.

In addition to Juncos, the following species have demonstrated their ability to withstand extreme temperatures—Gambel's Sparrow (*Zonotrichia l. gambeli*), White-throated Sparrow (*Z. albicollis*), Savannah Sparrow (*Passerculus s. alaudinus*), Tree-Sparrow (*Spizella m. ochracea*) and the domestic Canary!

There are several points that call for special mention. My experimental cage is lit up for some hours at night, the birds thus getting an advantage over the controls, which have to go daily without food during the sixteen hours of darkness that we get here in December. I have been prepared each day to rescue at least the control Canaries. But I have had to do no rescuing. The control cocks have never missed singing a single day through the winter and have enjoyed the best of health. Even at the height of the now notorious blizzard, responsible for numerous deaths amongst humans, at least two were sitting against the wires, barely able to retain their seats in the forty mile-an-hour gale, periodically lost to view in a cloud of swirling, driving snow with the thermometer at zero, singing as though it were spring. The Canaries in the experimental aviary, although most of them have been fit throughout, have done but little singing. A noticeable thing about the Canaries killed for examination has been the complete absence of fat, both in controls and experimentals.

More remarkable than the Canaries, perhaps, have been the Juncos in the experimental aviary. The moult of these birds has been very protracted, and although many of them were only half feathered, they showed no signs of distress at 35° below zero. Even more astounding was a single Savannah Sparrow from the control aviary. This bird alone among the wild species showed unhappiness every time the thermometer took a serious drop below zero. At 35° below he looked so wretched that I brought him in for a couple of days and then killed him for examination. As soon as he got into the house he was perfectly cheerful again and full of "pep." Although he was obviously suffering in the cold he had evidently taken no harm. On being killed it was ascertained that after his October moult he had completely failed to grow new feathers on his back. He was poorly feathered all over, but his back was *actually bare* and yet he survived 35° below zero. In addition he was heavily parasitized with nematodes. Surely amongst such birds as these seed-eaters, cold *quá* cold can hardly be considered a factor in the history of migration.

If cold has any direct detrimental effect on such species, it must surely be in the listlessness and inactivity that it induces. My experimental birds, whose aviary is lit with artificial light for so long each night, show a distinct tendency to go to roost earlier when the weather gets colder. At temperatures far below zero they can hardly be induced to move after they have gone to roost. This year I have kept a rough check on the amount of food consumed, and the increase during cold spells is very considerable. An inclination to decreased activity when the reverse is demanded may be the factor that is responsible for the absence of the migratory Sparrows from their northern range during the winter months. For Juncos and Tree-Sparrows *can* find enough food in ordinary winter weather to keep themselves fit. Some of my released birds have successfully spent two weeks out and returned so well fed that they have not even bothered to go to the food box on their return to the aviary. Moreover, occasional individuals of both species winter here of their own accord. On the other hand, of ten control Juncos released two days before the great blizzard, one had not entered the traps by the night that the blizzard broke loose. He was found a few days later frozen to death by the aviary. He no doubt perished in the storm as he was not noticed around the garden subsequently.

Apart from the question of actual cold, it is remarkable that the extreme changes of temperature to which we are liable here during the winter months have no detrimental effects on at least the Canaries. The night preceding the blizzard, when I was out at the aviaries at about 3 a.m. in pyjamas to salvage a curtain on the control aviary and to see how the birds were faring in a gale that nearly lifted me off my legs, the temperature was 45° above zero. Within twenty-four hours the thermometer had dropped some 55 degrees to 10° below. It continued to drop till it reached 35° below. And even greater and more rapid changes than this are on record. WM. ROWAN.
EDMONTON, ALTA., CANADA, 25th December, 1926.

WASPS DESTROYING YOUNG BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—In his note (*antea*, p. 198), Dr. T. G. Longstaff mentions the difficulty of obtaining records of insects preying upon nestlings in Britain. The following case may be of interest. In July, 1917,

in the vicinity of Cheltenham, I found the nest of a Blackcap (*Sylvia a. atricapilla*) containing three newly hatched young. Wishing to identify the parents, I hid near the nest. I noticed a large worker wasp flying round the brood at close quarters and occasionally alighting on the head of a nestling. The hen Blackcap was about five yards away from the nest and was "churring." Presently, I counted three worker wasps, which seemed to be engaged in stinging the nestlings. I killed one and drove the others away. The species was *Vespa sylvestris*. Thinking that if left undisturbed the parents would return, and defend their young, I left the spot for about an hour. On returning, I found several wasps engaged in gnawing the corpses of the young. I could see no sign of the parent birds. I have no reason for thinking that I had disturbed the nest of the wasps, thus causing them to attack the young birds.

OLIVER H. WILD.

BIRD'S-NESTING MICE AND VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—In 1924, two nests of the Long-tailed Tit (*Ægithalos c. roseus*), both with full clutches, were subsequently found deserted, with the linings of the nests disarranged and several eggs missing. In the bottom of each nest was a small hole. The eggs mysteriously disappeared from a nest of the Linnet (*Carduelis c. cannabina*) and a small hole was noticed in the nest-bottom. These nests were situated in gorse-bushes and were presumably raided by field-mice.

R. H. BROWN.

TITS EATING NUTS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Pearson's note on Great Tits eating nuts (*antea*, p. 177), it may be worth recording that monkey-nuts, which I fix in crevices in a tree trunk for Nuthatches (*Sitta europæa*), are taken quite as frequently by Great Tits (*Parus major*), and these birds hammer at the nuts as vigorously as the Nuthatches. Both species, when they can extract the whole nut from the crevice, fly away with it to some favourite place and pull it to pieces at their leisure. Coal-Tits (*P. ater*), Marsh-Tits (*P. palustris*) and Blue Tits (*P. cæruleus*) also feed on the nuts, but none of these seem to have sufficient strength to open them up by themselves. The Coal-Tits sit on a tree nearby watching the Nuthatches, and when one of the latter is ready to take the kernel out of the shell, a Coal-Tit will fly down suddenly, frighten the Nuthatch away, seize the kernel, and fly away with it, before the Nuthatch has had time to recover from its surprise. The Blue Tits and Marsh-Tits will wait until the Nuthatch has taken one of the kernels out of a double nut and flown away with it, and will then fly up to the nut, and get hold of the edges of the jagged hole and wrench pieces off, until they can get hold of the second kernel, when they immediately fly off with it.

Great Spotted Woodpeckers also come for the nuts, and when they can remove the nut bodily they will fly away and fix it in one of the clefts that they use for fir cones. When the nut is too firmly fixed they will make a hole in it and cut it up into tiny pieces, and eat it straight from the shell.

On one occasion I saw a Lesser Spotted Woodpecker try to get a nut, but it was frightened away before it succeeded.

N. TRACY.

SOUTH WOOTTON, KING'S LYNN.

COMMON BUZZARD HOVERING.

To the Editors of BRITISH BIRDS.

SIRS,—Though I have never seen a Common Buzzard hover, the following from my note book, relating to an observation of the Rough-legged species, may be of interest :—"November 7th, 1903, on the top of Stepney Hill, near Scarborough, a friend and I saw the bird fly across the road and it commenced hovering, somewhat Kestrel-like, over a field. We watched it with our glasses for some minutes."

W. GYNGELL.

[Sufficient evidence has now been published to show that Buzzards not infrequently hover.—EDS.]

SWIMMING POWERS OF YOUNG LAPWINGS.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. R. H. Brown in his recent article on Lapwings states that "Nestlings are expert swimmers" (*antea* p. 167). To what extent are they swimmers? Would they swim a fairly fast flowing stream, fifteen yards wide, in order to get to water-meadows on the far side?

I ask because I have a twelve-acre field between woods, wired round with $1\frac{1}{4}$ -inch wire netting, sunk in the ground. Four pairs of Lapwings nest yearly in the field and three usually hatch off safely. Within a week of hatching, young Lapwings and parents are in a water-meadow half a mile off. To get there they must cross a stream nine feet wide, a meadow, a small river ten to twelve yards wide, and get through $1\frac{1}{4}$ -inch mesh netting. The only alternative is that they are carried by the parent birds.

M. PORTAL.

WANTED.—Birds in variety plumage, or would purchase whole collection of such.

C. J. CARROLL, Rocklow, Fethard, Co. Tipperary.

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**ORNITHOLOGICAL REPORT FROM NORFOLK
FOR 1926.**

BY

B. B. RIVIERE, F.R.C.S., F.Z.S., M.B.O.U.

THE event of most outstanding interest to Norfolk ornithology in the year 1926, and one which seems likely to have an important bearing upon its future, was undoubtedly the purchase of Cley Marshes from the executors of the late Mr. A. W. Cozens-Hardy by a few public-spirited and enterprising naturalists, and the formation of a limited company, entitled the Norfolk Naturalists' Trust, to whom the property has been handed over to be maintained for all time as a bird sanctuary.

Cley Marsh, to which reference has frequently been made in these notes, is some 400 acres in extent, and is bounded on the north by a sea-wall, on the east and west by high banks, the former of which divides it from Salhouse Broad, whilst on the south runs the main coast road and the village of Cley. Formerly this area was well drained, grazing marsh, but it became flooded when the sea-wall was breached by an abnormally high tide during a gale on the night of December 31st, 1921, and having remained in a state of partial inundation ever since, has proved an extraordinarily attractive feeding and resting ground for Ducks and Waders. Its value as a Duck shoot may be gauged by the price of £5,160 which the 400 acres realized when sold at public auction, whilst as regards Waders there is probably no other spot in England where so many rare species may be seen at one and the same time during the spring and autumn migrations. Certainly there is none where they can be seen more easily, one of the best observation posts being in fact a motor car on the main road overlooking one of the gates on to the marsh ! Amongst the interesting passage-migrants which have visited it annually during the past few years may be mentioned Ruffs and Reeves, Black-tailed Godwits, Spotted Redshanks, Curlew-Sandpipers, Little Stints, Green and Wood-Sandpipers, Black Terns, and Spoonbills. A colony of Sandwich Terns bred there in 1923, whilst a Ruff and Reeve remained to nest in 1922, and encouraged by this latter fact and by our good fortune in having re-established the Bittern, one may still hope that on this ideal nesting ground, now that it is freed from all danger of disturbance, other of our lost Norfolk birds, such as the Black Tern and Black-tailed Godwit, may be won back to breed with us again.

The newly constituted Norfolk Naturalists' Trust which will administer this, and it is to be hoped, other Norfolk bird reserves which may be acquired in the future, has full power as regards limiting, and if necessary entirely prohibiting, public access to their property. The lack of such power has, I think, proved a serious disadvantage to the two Norfolk reserves which are owned by the National Trust, namely Blakeney Point and Scolt Head, the former of which is so overrun by visitors during the summer months that the protection of the Tern colony has become a matter of very great difficulty, and the task of the watcher almost an impossible one.

The year 1926 opened with a continuation of the mild weather which set in at Christmas, but on January 13th it gave place to a nine days' spell of exceptional severity, 16° of frost being recorded on the screen on the 15th, and 20° on the 16th. A return to mild open weather followed and was continued through February and March with the exception of a short wintry spell and a fall of snow towards the end of the latter month. Unusually fine warm weather prevailed during the first week of April, the thermometer rising to 74.5° on April 4th; but the rest of the month was dull and wet and was followed by an exceptionally cold May. These weather conditions seem to have had some influence upon the arrival of summer visitors, for although a few individuals, forming the vanguard, put in an appearance exceptionally early, the main body appears to have been unduly delayed, very few Swallows being present up till mid-May, whilst Swifts did not reach Norwich until May 10th, six days behind their usual date. The following are the dates of some first arrivals:— Wheatear, February 27th (E. L. Turner); Chiffchaff, March 30th (W. Tracy); Sedge-Warbler, April 2nd (Tracy); Willow-Warbler, April 2nd (B.B.R.); Swallow, April 3rd (L. Lloyd); Sand-Martin, April 3rd (Lloyd); Redstart, April 7th (Tracy); Whinchat, April 8th (Tracy); White-throat, April 9th (Tracy); Nightingale, April 8th (J. P. Burwell); Yellow Wagtail, April 9th (Tracy); Tree-Pipit, April 9th (Tracy); Blackcap, April 13th (Lloyd); Swift, May 10th (B.B.R.); Turtle-Dove, May 12th (B.B.R.).

From the Lynn Well lightship at the mouth of the Wash, my correspondent, Mr. W. S. Sharman, recorded the usual E. to W. passage of Hirundines throughout May and the first three days of June, whilst a Willow-Warbler was killed at the light on the night of April 7th, a Sedge-Warbler on May 17th and a Whinchat on May 21st.

The only other notable feature of the spring migration was the exceptional number of Bar-tailed Godwits which visited Breydon on their way north in May ; Jary, the watcher, recording that they were present in larger numbers than he ever remembers to have been the case during the past twenty-five years.

Fine and warm weather prevailed for the most part throughout August, September, and the first half of October, when a very cold spell set in till the end of the month with ground frosts nearly every night, after which open weather with very few frosts continued until the end of the year.

A few Redstarts, Pied Flycatchers, Wheatears, Whinchats, and Warblers arrived with a N.E. wind at Cley during the first week in September, and were also recorded upon several nights during the same period at the Lynn Well lightship (Sharman), but during the rest of the month, with winds mostly from a westerly quarter, practically no migration was seen at Cley, and only one Bluethroat was recorded (September 9th), Mr. E. C. Arnold describing it as " the worst September I remember."

Between October 1st and October 8th, however, with anti-cyclonic conditions prevailing over the greater part of western Europe, a great rush of birds travelling from E. to W. passed the Lynn Well light both by day and night, and during the week Mr. Sharman caught and identified the following species :—Lapwing, Knot, Starling, Skylark, Linnet, Chaffinch, Brambling, Greenfinch, Redwing, Song-Thrush, Blackbird, Ring-Ouzel, Meadow-Pipit, Robin, Goldcrest, and Wheatear. A considerable arrival of Woodcocks took place between the 17th and 24th of October with a wind between N. and N.E., one Yarmouth gunner flushing between twenty and thirty on Yarmouth Denes on the morning of the 21st ; whilst on the 21st and 23rd, Rooks, Hooded Crows, Starlings, and Skylarks were travelling from E. to W. and S.E. to N.W. over Poringland, the same movement being observed on the former day by Mr. G. Gurney at Hempstead, some twenty miles to the north-west.

Owing probably to a severe easterly gale which occurred on October 26th, the North Sea appears to have taken an unusually heavy toll of birds at the latter end of this month, for Mr. H. Cole, on November 4th, wrote that he had recently picked up on Cromer beach the drowned bodies of Blackbird, Fieldfare, Redwing, Ring-Ouzel, Linnet, Brambling, Siskin, Redstart, Goldcrest, and Blue Tit.

A notable feature of the late autumn was the unusually delayed departure of Swallows and House-Martins. Two young Swallows were seen being fed by their parents upon telegraph wires on October 18th (Jourdain), another was seen on October 26th (Jourdain), two were hawking over my garden at Poringland on November 1st, and one was seen on November 24th; whilst two House-Martins were seen on November 7th (Saunders), one on November 14th (Ley), and two on November 25th (Allen). The two latest migratory movements of the year were again recorded by W. S. Sharman from the Lynn Well light, a passage of Redwings, Starlings, Skylarks, Lapwings and Knots from E. to W., and of Rooks from S.E. to N.W. taking place on December 1st and 2nd; whilst a big rush of Waders was made evident by foggy weather on the night of December 5th; the casualties picked up next morning numbering twenty-seven, and consisting of Knots, Redshanks, Golden Plovers and Snipe.

Amongst the few rarities which were recorded during the year may be mentioned a small flock of Glossy Ibises, and several Dippers, particulars of which will be found under the classified notes.

COUES'S REDPOLL (*Carduelis h. exilipes*).—Dr. C. B. Ticehurst, in Vol. XII. of the *Norfolk & Norwich Nat. Soc. Transactions* (p. 263), records a male Coues's Redpoll killed at Marsham on January 4th, 1926, and also a female obtained at Yarmouth on October 26th, 1910. This race of Redpoll had not previously been identified in Norfolk.

CROSSBILL (*Loxia c. curvirostra*).—As foreshadowed in my last report, a large increase in the number of Crossbills nesting in Norfolk was apparent this year, following the immigration which was evident during the late summer and autumn of 1925. Not only was this the case in the Thetford and Castle Rising districts, but evidence of the birds' presence was also to be found in the pine woods to the north-west of Norwich (Tracy).

During the first half of June, two adults and five young birds, which were possibly reared in a neighbouring plantation of Scotch firs, were in the habit of coming several times a day to Mr. Moore's bungalow at Hellesdon, some two miles from Norwich, in order to drink at the gutter, and Mr. Moore was able to take an excellent photograph of them doing so from one of his windows.

WOOD-LARK (*Lullula a. arborea*).—During the past year or two there has been a very noticeable increase in the number

of Wood-Larks in Norfolk, and a considerable extension of their breeding area. Last year, I was able to record a new nesting locality in the northern half of the county, this being at Drayton; whilst this year there was evidence of their having also bred in the adjoining parish of Taverham. Throughout the "Breckland" districts of the south-west, they appear to have been well distributed, whilst Mr. N. Tracy reports that about six pairs nested in his immediate neighbourhood at South Wootton, a district in which they appeared for the first time in 1925.

GREY WAGTAIL (*Motacilla c. cinerea*).—A pair of Grey Wagtails again nested at Taverham and reared two broods, a Cuckoo's egg being removed from the second nest on May 26th (L. Lloyd). In view of the fact that these birds have now reared two or three broods of young ones each year for four years in succession, it is somewhat remarkable that no other Grey Wagtail's nest has been recorded up to now, either upon the same river or elsewhere in Norfolk.

REDSTART (*Phœnicurus ph. phœnicurus*).—Redstarts appear to be upon the increase in the extreme south-western area of Norfolk, Mr. N. Tracy reporting ten pairs in the neighbourhood of South Wootton, as against five last year. Of the six pairs which nested within his "sanctuary," two pairs again reared second broods. No instance of their nesting elsewhere has been reported, though a male was seen at Taverham on May 6th (L. Lloyd).

BLUETHROAT (*Luscinia s. gætkæi*).—The only Bluethroat reported during the year was one at Morston on September 9th (E. C. Arnold).

WREN (*Troglodytes t. troglodytes*).—At sundown on January 16th, the coldest night of the year, when the thermometer registered 20° of frost, thirty or more Common Wrens were seen going to roost in some old Martins' nests under the eaves of Woodbastwick Old Hall, but that all were not fortunate enough to secure a lodging for the night was evident from the fact that no less than twelve of these little birds were picked up dead next morning on the ground beneath, having presumably been killed by the cold. I have often known Wrens to make use of House-Martins' nests to roost in during the winter, but have never before known them "flock" to this extent; their doing so, upon this occasion being due, no doubt, to the very exceptional cold.

DIPPER (*Cinclus cinclus*).—On October 31st and November 6th, a Dipper was seen on the Wensum, whilst on December 10th no less than four were seen at the same spot (A. H. Patterson). As none of these birds came to a "bad end," it is impossible to say to what race they belonged, but all the Dippers which have been obtained in Norfolk, with two, or possibly three, exceptions, have proved to be of the typical Scandinavian and not the British form.

MARTIN (*Chelidon u. urbica*).—I do not know how near to the ground House-Martins have been recorded to have nested, but two nests which were built this year under the eave of the engine room at Poringland, were, I think, the lowest I have ever seen, measuring 6 foot 6 inches from the ground to their lower margins. Entirely undisturbed by the noise of the engine, both old and young showed extraordinary tameness. Up to the time when they left the nest the young ones would open their beaks to be fed when one put one's fingers in the nest; whilst during a day when the engine had to be dismantled and taken outside, regardless of all sounds of hammering and other manipulations, the parents continued to feed them within a few feet of the heads of the workmen who were doing the repairs.

SHORT-EARED OWL (*Asio f. flammeus*).—No Short-eared Owls nested in the Broads district in 1926, but a pair again frequented Scolt Head during the summer, where they appeared to have a nest, though this was never discovered.

KESTREL (*Falco t. tinnunculus*).—A Kestrel bearing a Witherby ring No. 79097, which was shot at Swaffham on August 9th, was, I am informed by Mr. Witherby, ringed as a nestling on June 10th at Haslingfield, Cambs.

ROUGH-LEGGED BUZZARD (*Buteo l. lagopus*).—A few Rough-legged Buzzards put in an appearance as usual during the late autumn, though there has been no large immigration of these birds since 1916, and previous to that in 1910. The great majority of those which visit us are immature, but a female which I saw, which had been shot at Blakeney on November 1st, was in adult plumage.

MARSH-HARRIER (*Circus æ æruginosus*).—A Marsh-Harrier, which from its plumage was either a female or an immature male, frequented Hickling during the last week in May, where I saw it on the 23rd and again on the 30th. A fine adult male also visited Hickling during the first week in September,

and another in not quite such advanced plumage at the end of the same month (E. Turner). Although well protected in the locality they most often visit, Marsh-Harriers have not, to my knowledge, nested in Norfolk since 1921.

MONTAGU'S HARRIER (*C. pygargus*).—Six pairs bred this year in the usual locality in the Broads district. One of these nests contained six eggs, which the Head Keeper tells me is the only clutch of six he has ever met with. Two more pairs bred upon another marsh in the same district, whilst another pair probably nested in the south-west area of the county (Sir H. Beevor).

OSPREY (*Pandion h. haliaetus*).—An Osprey arrived at Hickling on July 28th, and remained in the locality for some three weeks (E. Turner), whilst another, or possibly the same bird, was seen over Breydon on August 28th (E. Ellis).

SPOONBILL (*Platalea l. leucorodia*).—A Spoonbill arrived on Cley Marshes on April 1st and remained until April 28th, whilst one was seen by Mr. Witherby at the same place on May 31st. Only one visited Breydon this year, arriving on the morning of May 29th and leaving again the same evening, this possibly being the same bird which was seen on Cley Marshes two days later.

GLOSSY IBIS (*Plegadis f. falcinellus*).—A small party of Glossy Ibises visited Norfolk during September, an immature female being shot at Holme on September 11th (B. J. Sumpter), one seen at Hickling on September 14th and 16th (E. Turner), one on Breydon on September 16th (F. E. Gunn), whilst another—an immature male—was killed by a gunner when duck fighting, and I believe in ignorance of its identity, on October 7th (E. C. Saunders).

BITTERN (*Botaurus s. stellaris*).—Thanks to rigorous protection the number of breeding pairs has been well maintained. Eleven nests were reported to me, but this refers to a portion only of their present breeding area. J. Vincent tells me that he has now seen no less than fifty-five Norfolk nests since 1911.

RUDDY SHELD-DUCK (*Casarca ferruginea*).—A drake was shot at Holkham on May 27th.

TEAL (*Anas c. crecca*).—A Teal bearing a ring marked Lenigrad, Lesnoy Institut, D.523, was killed at Bowthorpe, near Norwich, on November 9th, 1926. Mr. Witherby is

informed by Prof. Sushkin that this bird was ringed on Luberetzkoie Lake, ten miles east of Novgorod (100 miles south of Petrograd), Russia, on July 25th, 1926.

CORMORANT (*Phalacrocorax c. carbo*).—On September 7th and 8th a Cormorant selected an unusual resting place upon a projecting ledge half way up the spire of Norwich Cathedral, where its somewhat sinister appearance caused, I believe, a certain amount of apprehension to some of the inhabitants of the Close, until assured of its identity by Dr. S. H. Long. On the evening of the 8th it was seen to fly away to the E.S.E., after which it was seen no more.

LEACH'S FORK-TAILED PETREL (*Oceanodroma l. leucorrhoa*).—On September 16th a Fork-tailed Petrel came into the hands of Mr. E. Ellis, which had been picked up alive in the river at Yarmouth, covered with oil and helpless. It had completely cleaned itself next day, having apparently swallowed the oil during the process, but it only survived a few days.

STONE-CURLEW (*Burhinus æ. œdicnemus*).—Mr. P. Meiklejohn reports that a pair bred this year on Kelling Heath, a site which has long been deserted. A pair again nested at Horsey, close to the sea, where they have now been established for some six or seven years. Other localities in east Norfolk where they now breed regularly are in the parishes of Taverham and Drayton.

COMMON SANDPIPER (*Tringa hypoleucos*).—On August 8th a Common Sandpiper was brought to Mr. A. H. Patterson, which had met with a somewhat unusual death, having swallowed a fishing hook baited with a worm, which had been left beside the river Wensum near Hellesdon, and being already dead when the angler returned to his rod.

GREY PHALAROPE (*Phalaropus fulicarius*).—Two females were obtained at Blakeney on October 18th and 21st.

AVOCET (*Recurvirostra avosetta*).—An Avocet which visited Breydon on December 5th met, at the hands of a boy, what is unfortunately the usual fate of these interesting and beautiful birds in unprotected areas of Norfolk. The date is a most unusual one, and is the latest I have any record of, the latest previous dates being October 12th, 1891, and November 2nd, 1888, both of which are recorded by Pashley (*Notes on the Birds of Cley*, pp. 24 and 29). Mr. E. C. Saunders, to whom the bird was sent, tells me that it was a female and

that it appeared to be a bird of the year, and was still in moult.

SANDWICH TERN (*Sterna s. sandvicensis*).—Well over 500 pairs of Sandwich Terns nested at Scolt Head, which is now our strongest colony, in 1926, about 75 per cent. of the nests containing two eggs, whilst there were six clutches of three. Unfortunately, the mortality among the young birds was extremely high, between 50 per cent. and 75 per cent. of these dying, the majority within twenty-four hours of hatching (S. H. Long).

At Blakeney Point some 100 pairs nested, whilst at Salt-house forty-five nests contained eggs at the end of May. These, however, were unfortunately destroyed, probably by rats, and the birds left; but five pairs laid again in the latter half of June, and successfully hatched off.

ROSEATE TERN (*S. d. dougallii*).—The Roseate Terns did not return this year to the Tern colony in which they nested in 1924 and 1925. A pair, however, bred in another colony, where the bird was watched down to the eggs by Mr. H. F. Witherby and Mr. J. Vincent on May 31st. The eggs hatched on June 21st, and both young ones were successfully reared (Pinchin).

LITTLE GULL (*Larus minutus*).—Mr. H. F. Witherby and I had a very close view of an immature Little Gull at Hickling on May 30th, whilst an adult was seen at Yarmouth on November 1st (E. C. Saunders).

LAND-RAIL (*Crex crex*).—Mr. W. S. Sharman of the Lynn Well lightship informs me that a Land-Rail was killed at the light on December 15th, a most unusual date.

COMMON PARTRIDGE (*Perdix p. perdix*).—Another example of the curious erythristic variety of Partridge, called by Brisson *Perdix montana*, was shot on October 5th at Bylaugh. This makes the twenty-eighth which has been killed in Norfolk since the year 1896, when they first appeared, all of these having been obtained within a limited and well defined area of the county. The following are the parishes in which they have occurred:—Bylaugh, Dereham, Sparham, Causton, Elsing, Hockering, Bawdeswell, Foulsham, Lenwade Taverham and Sculthorpe, and a glance at the map will show that, with the exception of Sculthorpe which lies some twelve miles to the north-west, this comprises an area of mid-Norfolk roughly oblong in shape and extending about ten miles from E. to W., and seven miles from N. to S.

THE WESTWARD FLIGHT OF AUTUMN MIGRANTS IN THE TAY ESTUARY.

BY

HENRY BOASE.

BIRD migration in the Tay Estuary is well marked both in spring and autumn. It has been watched in some detail by the writer and others for a number of years, and it was soon found that there were some unusual features in the autumn movements. The most important of these is the marked passage to the west in autumn, which, involving one species or another, occupies a period of about four months. In working out some of the details of this movement at Buddonness, and for tracing a similar passage of at least one group, the Swallows, in other parts of Scotland, the writer is indebted to H. R. Colman.

So far as has been traced, only one hint exists in older works of this movement of birds in the Tay area—a casual reference to the possibility of such a movement over the Auchterarder ridge, made by J. A. Harvie-Brown in his *Fauna of the Tay Basin*, which, while not stating anything definite, suggests that passage to the west over that line had been noticed. In the *Scottish Naturalist* for May, 1918 (page 109), the writer gave an account of the movement of the *Hirundines* as then known, not so much with any attempt at finality in the matter, but merely to draw attention to the question, and, since then, he and H. R. Colman have continued the work in more detail.

This westerly passage is used by a few species only and in widely varying degree. The Skylark (*Alauda a. arvensis*) heads the list for sheer numbers. The Meadow-Pipit (*Anthus pratensis*) and Swallow (*Hirundo r. rustica*) run it close in the importance of their movements, the Sand-Martin (*Riparia r. riparia*) follows in rank, and the House-Martin (*Delichon u. urbica*), the Swift (*Apus a. apus*), Finches, Pied Wagtail (*Motacilla a. yarrellii*), and perhaps the Mistle-Thrush (*Turdus v. viscivorus*), form the less prominent and often erratic users of this line of flight. Other species probably make use of it but show no consistency or numbers to merit their inclusion here.

It must not be supposed that the species using this line of flight are confined to it at all times or at any one time. All the species mentioned show movement in other directions in autumn, mainly to the east and south-east, and may show such movement simultaneously with passage to the west.

The writer makes no apology for reviewing once more the records referring to the *Hirundines*. The passage of Swallows to the west was first noticed in 1911, and since then has been observed on a varying scale each year. The earliest record of this movement so far obtained is July 15th, 1923, of which year the summer was cold and wet, while the latest occurrence recorded is October 15th, 1916, giving a maximum period of three months. The average period of passage, however, is from July 25th to September 25th; records beyond the last-named date are for small numbers only. When passage has continued in October, it has generally happened that the last birds seen for the year were so engaged. Of course, there are some records where the birds were merely feeding, when the direction of their flight was uncertain, but on no occasion so far has passage in any other direction been seen in October. The passage to the west has been watched during all daylight hours, but in the period from midday to about three o'clock there is a distinct slowing down of the passage. The birds may travel singly, more usually in small parties, sometimes in large parties, and varying in height from skimming land or water to high flying almost beyond the range of unassisted vision. Over the town of Dundee, some at least pass at about five hundred feet. The weather does not appear to be a very decisive factor—it rather determines the manner of the flight, whether in ones or twos, skimming low against wind and rain, or wheeling in parties in the calm sunshine of an autumn evening. So far as has been noted, adults are in the majority among the early passage birds; later, young birds predominate. It is, however, not an easy matter to determine.

The westward passage of House-Martins is not so marked as that of the Swallow; the numbers involved are far less. The earliest record of passage to the west is July 25th, 1920. Only one other July record has been got, that of July 27th, 1923, and in general the passage does not develop until the second week of August. The latest date of this passage so far noted is October 7th, 1912, but ordinarily it is over by the fourth week of September, thus showing an average period of about five weeks. House-Martins appear to be less sociable in migration than the other *Hirundines* and generally travel alone on this line of flight, not associating with the movements of Swallows and Sand-Martins. They are met with on passage to the east and south-east rather more frequently than either Swallows or Sand-Martins.

The Sand-Martin, in its passage to the west, is commonly associated with the Swallow. The movement has been seen

so early as July 17th, 1920, and on one occasion extended to September 16th, 1923. Normally, however, the period of passage extends from the fourth week of July to the first week of September. Almost in every case, the last Sand-Martin for the year is seen on this flight, and on few occasions has flight in other directions been seen, even during the height of its passage.

The Swift is also associated with the *Hirundines* on the passage to the west in autumn, but is rather erratic in numbers and dates. Over a period extending from mid July to the end of August, this movement of Swifts may occur. There is some evidence that passage may take place at a considerable height, and this may account for the uncertain behaviour observed. When the passage does take place, the numbers are fairly large. Swifts have not been seen on passage at Buddonness in August so far.

In point of numbers, the passage of the Skylark to the west is the most important. It differs from the foregoing species in that by far the largest numbers have been seen passing up river at or near Buddonness, and not to the west of Dundee. The passage has been seen as early as September 8th, 1925, but normally it does not begin until the second week is advanced. Passage may continue into December; indeed, it is commonly revived under stress of weather, which goes to show that, as a movement, it has complexities. The main passage is over by the second week of October and after that time such revivals as occur are on a comparatively small scale. The time of passage in daylight is confined to the forenoon, and after half-past eleven or so there is generally a marked drop in numbers. The birds pass in parties of a dozen or twenty, generally at a moderate elevation, and they call frequently. Over Dundee, the birds rise to two hundred feet or so. On occasions, during the height of the movement during the last week of September and the first week of October, the numbers passing within sight near the Buddonness may reach thirty per minute up to half-past ten. At Buddonness, generally beyond the lights, a small proportion, perhaps 10-15 per cent., of the birds pass to the south instead of turning west up the river; this has been observed only in October.

The Meadow-Pipit passage is very similar to that of the Skylark. The earliest date of the movement, however, is August 30th, 1925, and the average date is in the first week of September, while the first week of October sees the finish of the main movement. Like the Skylark, irregular passage

of small numbers may occur up to the end of the year. The manner of flight and the time of the movement are similar to those of the Skylark. There is just a hint in some records that some passage may take place in the evening. In numbers, the Meadow-Pipit rarely exceeds one-fifth of the Skylark, with which it is generally associated.

These six species are the only ones which use this overland route in any numbers. During the main movement, but for the most part during the second half of September and the first days of October, the Greenfinch (*Chloris ch. chloris*), Linnet (*Carduelis c. cannabina*), and Pied Wagtail pass in small numbers. These birds share the peculiarity of passing for the most part in the evening, which may indicate that the main passage takes place after dark. There is, however, no direct evidence of this. There are a few records for these species passing to the west at Buddonness in the forenoon during brisk movements of Skylarks. There is some indication that the Chaffinch (*Fringilla c. cælebs*), Lesser Redpoll (*C. l. cabaret*), and Mistle-Thrush may also take part in this movement, but the numbers seen have been very small.

It may be well to indicate the limitations imposed in observing this passage up river. As usual it is somewhat dependent on the weather conditions, it is restricted in time and place of observation, and the presence of training camps on Buddonness with their rifle and artillery ranges has rendered difficult any work there until the break up of the camps at the end of August. Hence, the movements in July and August have been observed for the most part on the west side of Dundee. This portion of the record, however, covers a period of about fifteen years. It was not until the Buddonness was worked from 1922 onwards that the fuller understanding of the records was possible.

It seems clear that the movements described must refer almost entirely to birds nesting in Scotland. The marked fall in numbers by the first week of October is significant. The considerable numbers of Swallows and Sand-Martins involved, neither of which is a passage bird in numbers to northern Europe, and the early start of their passages are indicative of the nature of the movements under discussion. The Skylark presents at first sight a more difficult problem, yet the matter is rendered fairly simple when the arrival of Skylarks from northern Europe, as given by Eagle Clarke in his "*Studies*," is taken into consideration, namely from the first week of October, with the main arrival in the third week, which information rules out any real connection between the

movements. The Meadow-Pipit shows a similar position to the Skylark in reference to the arrival of that species from overseas. In some years the passage to the west observed in the Tay Estuary has coincided with a passage to the south in south-west Scotland, as shown by the returns from lights there. As to the other species to which reference has been made—Swift, Pied Wagtail, etc.—nothing very definite can be said about them. The Pied Wagtail is, of course, almost confined to these islands and the Swift shows no record late enough to give any suggestion of passage from the north-east.

As has been already stated in dealing with the Skylark, a proportion of the birds seen passing at Buddonness pass to the south instead of turning up the Tay, and this tendency becomes more marked as October is reached. It seems reasonable to suppose that this rising proportion in October consists of birds from overseas, from northern Europe, making their way south on the east coast of Great Britain. There have been several records of arrivals of Skylarks and Meadow-Pipits from the east in east Fife in the second half of September and early October. These may have been direct arrivals from the north-east or they may have been parties which had missed the Tay estuary and had turned in to St. Andrew's Bay for rest and food. The passage to the west of Skylarks and Meadow-Pipits, which continues during October and November and even December, may consist of immigrants from the north-east passing inland by the river route, but the observed scale of the movement is small, and it is conceivable that these daylight passages may still be the movement of lingering summer visitors to Scotland, of local migrants, and of residents moving under stress of weather, and not to overseas immigrants, whose arrival is more likely after dark.

As indicated in the opening paragraph, this passage to the west has been met with in other parts of Scotland. The passage of the Swallow group has been traced on both shores of the Tay Estuary, from Buddonness westwards to Perth and Bridge of Earn; it has been found on the north side of Strathmore, in the hills at the head of Glen Clova, in Deeside about Ballater, about Dunkeld, in the stretch of Strath Tay about Aberfeldy, in Strath Tummell towards Rannoch, near Culross on the Forth, and in the area about Fort William. These records indicate the widespread nature of the passage. At Buddonness, the birds come from the north or slightly east of north, as though cutting straight across from the coast line at Abroath and turn up the Tay estuary at the Ness. The Skylark has been seen passing to the west in Strathmore

in the early afternoon, the forenoon of which day was marked by a very brisk passage at the Buddon. This bird was seen on one occasion passing to the west early in October in the upper estuary of the Forth. Finches have also been reported passing up river in the Forth within the dates given for the Tay movements, but the numbers have been small.

The conclusion suggested by these notes is, in general, that the species mentioned show a definite passage westwards over a considerable area, that this passage seems to concern Scottish breeding birds for the most part, and that probably a small proportion of winter visitors and perhaps passage migrants may use the route. The existence of cross-country routes from Forth to Clyde and Forth to Solway has been known for some time and it is with these routes that the Tay passage line will be associated after passing the low ridge at Auchterarder. The view that this passage concerns the departure of Scottish breeding birds is strengthened by the fact that the Skylarks and Meadow-Pipits of much of Perthshire depart from their nesting places on the moors during the first half of August, and the evidence of passage to the coast from that time onward in the Tay Estuary is so slight that it seems quite unlikely that the departure is by an eastern route.

The passage to the west in autumn might be expected to have its counterpart of passage to the east in spring. So far, the presence of this movement has been revealed by very small indications. The Swallow has been seen passing to the east on two occasions only ; in both cases they were single birds, the first seen for their respective years. The Swift has shown on this line of flight on three occasions, once so late as May 21st, 1915. The Skylark has been detected once only, on April 13th, 1924, when three small groups passed to the east. Beyond these records, nothing definite has been got. All these species show a definite passage to the west in spring.

NOTES

HEREDITY IN ABNORMAL EGG-COLORATION.

IN 1925 I found a nest of a Robin (*Erithacus r. melophilus*) with five pure white eggs not far from Great Waltham, Essex. These eggs were of an almost spherical shape. In 1926 I found three nests in one week in the same neighbourhood all with the same type of egg: one bird laid six and the other two five each. I also found a fourth bird with very poorly marked eggs. Does not this tend to show that the marking of eggs is to some extent hereditary? For a similar case with Spotted Flycatcher see *B.B.*, Vol. VI., p. 343. Unfortunately, although I found six of the nests of the above Robins in all in 1926, I cannot say that any of the birds raised broods, as all the nests were destroyed by mice or Jays. One bird had three nests in a five-yard circle in a wood and they were all spoilt.

J. H. OWEN.

CROSSBILLS BREEDING IN SURREY.

WITH reference to my note on Crossbills in Surrey (Vol. XX., p. 23), I am pleased to be able to report that at least two pairs bred, as, although I failed to find any nests (owing to the large number of fir trees in the neighbourhood), I had the pleasure of seeing two pairs of birds with fully fledged young, feeding on the ground under fir trees on June 26th, 1926, and the birds have been about in some numbers all the winter since.

C. W. COLTHRUP.

It may be of interest to record that on March 2nd, 1927, I saw in a certain district in Surrey two nests of Crossbill (*Loxia c. curvirostra*) containing eggs. From observation I think that this bird is a scarce resident in the neighbourhood indicated, and I have seen odd pairs in other districts in the county.

J. BEDDALL SMITH.

[For previous records see Vol. III., pp. 404, 406; IV., p. 187; XX., p. 53.—EDS.]

HOUSE-SPARROWS' WINTER NEST-BUILDING.

THERE has occurred in Leicestershire a rather interesting demonstration on the part of a colony of House-Sparrows (*Passer d. domesticus*) in the building of winter nests. In November, 1926, they were observed carrying material, building nests and repairing old ones in the ivy on an out-building. Upon closer observation it was found that these

nest were being used for roosting, and in some cases by more than one bird, which fact gave the observer the impression that these nests were being constructed solely for roosting purposes. In December or early January, when it became necessary to remove the ivy from the building, it was found to contain no fewer than forty new domed nests, and all snugly lined with clean dry feathers. None contained eggs. Of course one is familiar with the frequent occurrences of Sparrows and other birds defying the conventions and hatching out young in December and January, but it would be interesting to know if there have been other instances of this wholesale building of winter nests by Sparrows. W. E. MAYES.

[In towns, Sparrows will breed at any time of the year. A certain amount of perfunctory building is also going on from time to time. If the forty nests above mentioned were really all new it is certainly curious, but it would seem to be difficult to distinguish a breeding nest of 1926, freshly lined with feathers, so as to make a roosting place, from a new nest. Among birds which breed in communities the example of one bird is often followed by the rest.—F.C.R.J.]

WOOD-LARK IN YORKSHIRE.

ON January 7th, 1927, at Goathland, a single Wood-Lark (*Lullula arborea*) flew close over my head, coming from the north-east, and settled in an oak tree close by—the most northerly point I have seen this bird previously is N.W. Lincolnshire, where it nests annually—one or two pairs. I have never seen it in Yorkshire before, nor do I know of any Yorkshire nesting-site, though I should not be surprised if it did nest in the Pickering district, where I know of several apparently suitable spots. It is most likely this bird was passing, going further south to breeding ground. I never saw it again.

W. S. MEDLICOTT.

CHIFFCHAFFS WINTERING IN SUSSEX.

ON January 8th, 1927, I first noticed a Chiffchaff (*Phylloscopus c. collybita*) at Fishbourne, West Sussex. On the 21st my friend, Mr. William Shaw, saw two together, feeding on the willows. I subsequently observed single birds here on January 9th, 25th, 27th and 28th, and February 1st, 6th and 9th. On February 10th I saw two birds at once, on different sides of a mill-pond, one calling and the other silent. From February 18th until March 6th I saw nothing of them. On the latter date I saw both birds and heard one of them in good song for the first time.

RAYMOND CARLYON-BRITTON.

BLACK REDSTARTS IN DERBYSHIRE.

WHILE in Deepdale (two miles east of Buxton) on March 7th, 1927, I saw two Black Redstarts (*Phœnicurus ochrurus gibraltariensis*) and was fortunate in keeping them under observation until they flew into a plantation close to the Topley Pike entrance of the dale. They moved rapidly and silently over the screes, occasionally dropping out of sight as they flitted among the masses of jumbled stones and old nettle stalks, apparently hunting for food. Both birds were dark-breasted; probably adult males. JOHN ARMITAGE.

LITTLE OWL IN DENBIGHSHIRE.

ON January 18th and again on March 16th, 1927, I observed a Little Owl (*Athene noctua*) at close quarters here at Garthmeilio, Llangwm, Denbighshire; on both occasions towards mid-day. These records, which I think are the first for Denbighshire, are the more interesting taking into consideration the fact that Garthmeilio lies in a quiet side valley amongst the Denbighshire hills, 900 ft. above sea level.

M. V. WENNER.

ROUGH-LEGGED BUZZARDS IN YORKSHIRE.

ON December 9th, 1926, I watched from my house at Goathland a Rough-legged Buzzard (*Buteo lagopus*) hunting the moor close by. It "hovered" two or three times for several seconds and flew off eventually in a southerly direction. While hunting in the Mulgrave Woods, near Whitby, on February 15th, 1927, another flew out of a large oak tree less than two hundred yards from me and settled in another a hundred yards off.

W. S. MEDLICOTT.

SUPPOSED MALLARD × EIDER HYBRID SEEN IN DEVON.

IN December, 1926, I saw off the south coast of Devon a strange Duck, which would appear to be a hybrid Eider-Mallard. Four of us saw it, in a perfect light and flat calm, and so close that with two good telescopes (one a Ross) amongst us it was almost like having the bird in our hands. In shape and general colour the bird was exactly like a duck Eider (*Somateria mollissima*), of which I have seen great numbers in Scotland and generally two or three here in Devonshire each winter. But on each wing it had the complete speculum of a Mallard (*Anas platyrhynchos*), two narrow white bars, with the broad dark band in between. It also had the small curled-up feathers on the tail like a

Mallard drake. It dived repeatedly, and we saw it bring up and eat a small crab, a small star-fish and several other things we could not make out, they were swallowed so quickly. Finally, we saw it sitting on a low rock, surrounded by the sea, a little way from us. The curled feathers over the tail are very puzzling in conjunction with the rest of the plumage which was entirely female. At the same time I feel sure that these feathers could not have been merely ruffled up, and one of my companions agrees with me that though not a very conspicuous feature they were quite distinct and noticeable.

ERNEST ALLEN.

[Of course it must always remain in doubt what this bird actually was. The description does not agree at all with that of the Mallard \times Eider cross described by Dr. Eagle Clarke (*Scott. Nat.* 1912, pp. 198–201) which, moreover, was said not to dive. It is unusual also for any Mallard hybrid to show the upcurl of the tail-coverts to anything like the extent of the pure species, and the combination of these and a speculum with the diving and eating of crabs is very puzzling.—EDS.]

GOOSANDERS IN SHROPSHIRE.

ON Saturday, February 12th, 1927, I had brought to me for identification an adult male Goosander (*Mergus merganser*) which had been shot, out of a pair, on the Severn below Atcham Bridge the same morning. This section of the river seems to have a special attraction for the Goosander, and I have known parties remain there in winter for weeks at a time. This was especially notable in the winter of 1885–6. Its visits to Shropshire are very irregular, and I have no records between 1918 and the present time. H. E. FORREST.

RED-NECKED GREBE IN CHESHIRE.

FROM December 29th, 1926, to January 22nd, 1927, a Red-necked Grebe (*Podiceps g. griseigena*), the rarest of the Grebes in Cheshire, was present at Marbury Mere, near Northwich, and was seen by Mr. J. Moore and myself. On several occasions I was able to watch it very closely and see the details of its plumage: the front of the neck was deep chestnut-red, paling to light colour on the breast; its bill was yellow with a darker tip; and across the whitish face were two slight dark streaks. On several days it associated with a Great-crested Grebe (*Podiceps c. cristatus*), giving a good opportunity for comparison.

A. W. BOYD.

LONG-TAILED SKUA IN LEICESTERSHIRE.

AN immature male Buffon's or Long-tailed Skua (*Stercorarius longicaudus*) was put up with a covey of Partridges at Melton

Mowbray, Leicestershire, on October 3rd, 1926, and was inadvertently shot. This is the first record of the bird having occurred in the county. The bird has been added to the Leicester Museum collection.

W. E. MAYES.

RING-OUZEL IN LEICESTERSHIRE.—Mr. W. E. Mayes informs us that a cock Ring-Ouzel (*Turdus torquatus*) was seen at Gopsall Park, Market Bosworth, Leicestershire, on June 4th, 1926, and that the last recorded occurrence of the bird in the county was in 1888.

BLACK REDSTART IN SOMERSET.—Mr. Joseph H. Symes informs us that he saw a Black Redstart (*Phœnicurus ochrurus gibraltariensis*) at Coat, Martock, on October 30th, 1926.

PINTAIL IN BERKSHIRE AND OXFORDSHIRE.—Messrs. F. R. Barlow and J. D. Wood write that they identified a pair of Pintail (*Anas acuta*) at the Reading Sewage Farm on January 26th and 31st, 1927, and two pairs near Twyford on March 24th, 1926. Messrs. A. B. and J. R. Gillett, P. Campbell and Miss M. Campbell also inform us that they saw a drake on the lake in Woodstock Park on January 7th, 1927.

LITTLE AUK IN YORKSHIRE.—Mr. W. S. Medlicott writes that a Little Auk (*Alle alle*) was caught alive on a pond at Driffild on December 2nd, 1926, and brought to him.

LETTERS.

LAPWING CARRYING ITS YOUNG.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to a letter by Mr. M. Portal (*antea*, p. 256), is it worth while pointing out that—so long ago as 1905—that most reliable field-ornithologist, the late Robert Service, described how he had himself seen a Lapwing carrying its young? His description will be found in *Trans. Nat. Hist. Soc. Glasg.*, 1905, Vol. VIII., pp. 48–9, and is quoted in *The Birds of Dumfries-shire*, 1910, p. 373.

HUGH S. GLADSTONE.

SWIMMING POWERS OF YOUNG LAPWINGS.

To the Editors of BRITISH BIRDS.

SIRS,—In answer to Major M. Portal's enquiry (*antea*, p. 256), I have known young Lapwings swim a stretch of water about thirty yards in extent, formed through the flooding of low-lying land, and have seen them swim the marsh creeks when the tide was flowing in and they had from ten to fifteen feet of water to cross. The adults usually fly to the far side of the creek or stream and call to the youngsters, who enter the water without the least hesitation and swim as well as young Ducks or Moorhens. One day I disturbed a brood of young, about three days old, and one immediately made for a creek and swam the five or six feet stretch of water.

Young Oystercatchers can swim well; whilst on two occasions I have seen them swim under the water, like young Sheld-Ducks. So far I have not seen an adult Lapwing swimming, but on several occasions have noticed adult Oystercatchers swim a medium-sized river, and on reaching the far side fly away.

R. H. BROWN.



REVIEWS



The Birds of the British Isles. By T. A. Coward. Third series. (Warne). Illustrated. 10s. 6d. net.

THIS is a third and supplementary volume of Mr. Coward's well-known work, and we feel sure it will be warmly welcomed, as in it the author not only discusses subjects which were scarcely touched on in the main work, but also aims at bringing that work up to date and gives plates of many of the rarer species not figured in the previous volumes. The coloured plates are, as before, reduced reproductions from Lilford's "Coloured Figures," while on the reverse of each plate is printed a photographic illustration of bird or nest, many of these being of rarer species but some of familiar ones.

The introductory part of the book is largely taken up with an excellent summary of migration as affecting the British Islands. To a few of Mr. Coward's statements under this heading we might fairly take exception. For instance, that many of our summer residents "travel far east before they turn south to reach Central or Southern Africa; many selecting the fertile Nile Valley and the Sudan as better routes than the Sahara." If this means, as it appears to, that individuals breeding in Britain migrate down the Nile Valley we know of no evidence for the truth of such a statement.

In his chapter on "Nomenclature," Mr. Coward gives a very fair representation of this difficult and contentious subject. We like especially his remark that "Ornithology is a living, progressive science, and ornithologists keep it very much alive by disagreement."

The bulk of this volume, however, concerns the birds themselves, and gives under headings of families corrective or additional details about birds mentioned in the first two volumes and brief references to rare visitors. In these pages there are many notes of interest, a selection of which it may be appropriate to quote here. On page 78, the author's observation that ten Carrion-Crows (*Corvus corone*) came in with Hooded Crows at Spurn (Yorkshire) on October 16th, 1911, and one a few days later, is particularly interesting as there are so few reliable records of this species as an immigrant. Mr. H. A. Gilbert has recently referred in our pages to the nest of a Raven (*Corvus corax*) in a tree (*antea* p. 229), and Mr. Coward quotes another instance of this revival of an old habit on the authority of Mr. W. W. White, who saw young Ravens in a nest in a tree on Dartmoor in 1925 (p. 81). A curious case of a Magpie (*Pica pica*) building an open nest in heather in the Isle of Man is quoted on the same page. There seems no good record of the breeding of the Pied Wagtail (*Motacilla a. yarrellii*) in Shetland, but the White Wagtail (*M. a. alba*) has several times been noted as breeding there, and it will be interesting to see if Mr. Coward's assertion that this latter form breeds there *annually* (p. 98) is confirmed by future observation. The occurrence of a pair of Bearded Tits (*Panurus biarmicus*) in Sussex for two consecutive summers is of note even if no nest was found (p. 108). There are some valuable observations on page 130 concerning the Black Redstart (*Phoenicurus o. gibraltariensis*), which tend to show that it is more regular than has been supposed as a passage-migrant on the west coast of Great Britain, and this fits in with its known fairly regular

occurrence in the south and east of Ireland. The author also states that recent information shows that the bird is as regular a winter visitor to Somerset and Dorset as it is to Cornwall and Devon. With regard to the nesting of this species on the south coast, recorded by Mr. Coward in our pages (Vol. XVIII., pp. 76-7) as having taken place in 1923 and 1924, our readers will be pleased to note the news given in the volume now under review (p. 132) that at least two pairs of these birds nested and brought off young in 1925. Mr. Coward states (p. 173) that he has carefully investigated a case of a drake Harlequin-Duck (*Histrionicus histrionicus*), shot in January 1916 or 1917 at Crossens, near Southport, and has come to the conclusion that it was a genuine migrant. It is, perhaps, by a slip that its origin is given as America, since Iceland seems more probable. With regard to the passage of the Black Tern (*Chlidonias niger*), Mr. Coward gives some good evidence to show that it passes through Cheshire, Lancashire, north Derbyshire and Staffordshire *regularly* (pp. 218-19), and he concludes that, owing to the rarity of the species further north, these birds must cross over England to reach their Continental breeding grounds. The statement that the White-winged Black Tern (*Ch. leucopterus*) is a *regular* bird of passage in Norfolk (p. 219) does not agree with published records, and we should welcome more evidence on this point.

On page 250, the author quotes Mr. Collingwood Ingram's *dictum* in the *Ibis*, that because he could not with certainty distinguish French from British Blue Tits, therefore the subspecies *P. c. obscurus* was very doubtful. But even if for the sake of argument it were agreed that French and British birds were not separable, what is Mr. Ingram going to call these birds if not *obscurus*? Surely the marked difference in colour (to say nothing of size) in Scandinavian birds would scarcely escape his detection, in which case Linne's name *cæruleus* would be inapplicable and he would have the same difficulty in applying one of the names given to German birds. Had Mr. Ingram discussed these essential points, Mr. Coward might have had more justification in supporting him.

In conclusion, it may be said that this volume is packed with observation, and that we cannot too strongly recommend it to the attention of our readers.

H.F.W.

The Migrations of Birds. By Alexander Wetmore, Harvard University Press (London: Humphrey Milford). 1926. pp. viii, 217.

CONSCIOUSLY or unconsciously our outlook on migration has insular bias; we cannot visualize migration without considering the influence of birds from other areas upon our island group. The American's experiences are, naturally, more continental; he sees movement of large bodies of birds which find within the States, or in the North American Continent, those extremes of climatic and other conditions which are the cause of seasonal journeys. Furthermore, the intimate connection of migration with distribution can be better realized in a continental area than in one in which geographical races are mostly insular or are passing visitors. By way of illustration: we have three races of Song-Thrush in our fauna, but knowledge of their migration range is still incomplete; in the Western States alone, Swarth's work on the Fox-Sparrow reveals an interesting fact about the distribution of the six geographical races. The three forms that breed furthest north, winter in the same area furthest south; the fourth breeds further north than the fifth and winters further south; the sixth is practically

sedentary at the centre of the specific range. This supports a well-known theory about the more northerly forms travelling to most southerly winter quarters, an idea which is not always supported in the Old World by what we have learnt from the ringing of resident and passage birds.

Mr. Wetmore's experiences are not limited to North America; he has had opportunity to observe in many parts of South America, and has studied the movements of birds in the tropical forests, as well as the writings of students of migration in all parts of the world. His conclusions disprove rather than modify the old idea that Tropical forms are sedentary, for even in the forests there is seasonal migration in search of food areas, which may be regular or irregular according to the prevalence of rains or droughts.

Altitudinal migration is a phase which is seldom studied in Britain, but in high mountain ranges is genuine seasonal migration; even here we know that the sedentary Red Grouse descends to lower levels under stress of weather, whilst the Dipper, Grey Wagtail and Twite leave the tops every autumn for the lowlands.

On the origin of migration, and the vexed questions of height and speed, distance travelled, route or broad-front migration, and path-finding he has no fresh conclusions to offer, though he supplies many interesting facts, largely the result of "banding" and systematic observation. He inclines to disbelief in migration at high elevations, and considers that Meinertzhagen's and Ingram's investigations prove that most flight is at under 3,000 feet; this may be so, but the fact that so many instances of high flight were collected in a relatively small area may mean that high flight is more general than is supposed; his suggestion that "birds must feel keenly the lack of buoyancy of the upper reaches" is rather dogmatic without further evidence. Again, he affirms that "there is no apparent advantage in altitude is indicated by the fact that comparatively few attempt it"; who knows how few or how many do attempt it? He believes what Gätke believed, that birds travelling with a following wind lose balance and have their feathers disarranged, but who has ever seen a bird flying more slowly than the air current in which it was moving?

On the perils of migration he has some sound arguments about the influence of man on a species which maintains its position, its existence as a species by a delicate balance; he believes that it was excessive shooting that brought disaster to the Passenger Pigeon and Eskimo Curlew in spite of many arguments to the contrary.

Mr. Wetmore's evidences of exceptional route migration are exceedingly interesting, for he shows that in the Northern Hemisphere, under certain geographical conditions, the direction of normal migration is reversed—in autumn from south to north, and spring north to south. According to his own experiences in South America, and to the observations of others in South Africa and Australia, migration from southern breeding areas to more northerly winter quarters is never so extensive as the southward travels of the Arctic and northern Palearctic forms, nor are the distances travelled so great. The evidence he supplies of the long Atlantic and Pacific oversea journeys of many northern waders should satisfy those who have doubted the assertions of Cooke and others.

In two hundred odd pages Mr. Wetmore has collected a very large amount of valuable information, and has presented it in a concise and readable form; the book is a very useful addition to our literature of migration, but, alas, as a work of reference it has one great fault; it is unfinished, for it lacks an index.

T.A.C.

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AUTUMN MOVEMENTS OF JACK SNIPE AND OTHER BIRDS OBSERVED ON A CHESHIRE SEWAGE-FARM.

BY

T. A. COWARD.

AUTUMNAL passage movements of the Jack Snipe (*Lymnocyptes minimus*) are described as from mid-September to the end of November in the *Practical Handbook*, and August 12th and 20th are given as early dates. With the exception of one bird reported in early August my Cheshire experiences of this species agreed with this until the autumn or summer of 1926. In *British Birds* (Vol. XX., p. 133) two early dates for 1926 were recorded, a bird shot on Dartmoor on August 3rd, and one seen in Wigtonshire on August 6th. Apparently there was an unusually early immigration or passage of the birds at this time. Not only did the Jack Snipe appear earlier but in very much larger numbers than I have before seen in Cheshire. Mr. N. Neave reported to me that he had seen one near Rainow on July 25th, and on July 30th I found one amongst a large number of Common Snipe (*Capella g. gallinago*) on the Altrincham sewage-farm.

In connection with the early appearance and numbers of Jack Snipe which I observed, it may be of interest to give a few details of the fluctuations of other species. Black-headed Gulls are usually plentiful on and around the tanks, but on July 30th I counted thirty-five Lesser Black-backed Gulls (*Larus fuscus*), all immature. A little party of four Common Sandpipers and six Ringed Plovers were on one tank, and all over the farm were large numbers of Lapwings, Yellow and Pied Wagtails, and Linnets, and at least one White Wagtail (*Motacilla a. alba*). During the next three weeks I paid several visits to the farm, but did not see any Jack Snipe, though Common Snipe were plentiful, and especially numerous on August 17th.

On August 5th the numbers of Gulls had increased, there being at least fifty Lesser Black-backs. On the 12th a fair number of Dunlins (*Calidris alpina*) had joined the other waders, and with them was a Sanderling (*Crocethia alba*); it was still there on the 14th, when there was also a single Curlew-Sandpiper (*C. testacea*).

On the 14th I could see only thirty Lesser Black-backs, but on the 21st I counted eighty-eight, and many were mature birds. Three Green Sandpipers (*Tringa ochropus*) were on one tank, and everywhere Sand-Martins and Swallows were feeding about the tanks and fields.

On August 24th, Redshanks, Dunlins and Ringed Plovers had increased in numbers, Common Snipe were more numerous than I had seen them, whisps rising everywhere that I went, and on one tank I found between fifteen and twenty Jack Snipe. I could not be sure of the actual number for the tank, which had been ploughed, was only partially flooded, and birds kept appearing from the furrows; I counted twelve visible at one moment, and others appeared and disappeared amongst the clods. These Jacks were not nervous, remaining sleeping or feeding long after all the Common Snipe had taken alarm; when at last I put them up they flew low to near-by tanks. On this date I put up four Teal (*Anas c. crecca*).

Redshanks, Dunlins and Ringed Plovers were in even larger numbers on the 26th, and I disturbed twenty-one Teal, but apparently some of the Jack Snipe had passed on, for I could find no more than half a dozen. On my next visit, on the 28th, I could not see a single Jack, and all the Ringed Plovers seemed to have left. The Dunlins were reduced to six, and the Redshanks to three, an unusually small number; many Lesser Black-backs had departed, for whereas on the 26th I counted seventy-seven, I could make out no more than twenty-one on the 28th.

My next visit was on September 8th, when not a single large Gull remained, and the Black-heads were considerably reduced in numbers. But other birds had come in, for Lapwings and Redshanks were again numerous, and with the latter was a Ruff (*Philomachus pugnax*), the only one that I saw that season. Common Snipe were still abundant, and with them were eleven Jacks, the last that I saw. Other birds on that date were four or five Dunlin, a Ringed Plover and a very sleepy Sanderling. Wagtails, Pied and Yellow, were again passing in large numbers, and I saw one male Blue-headed Wagtail (*M. flava*). On the 10th a Little Stint (*C. minuta*) was with a rather larger group of Ringed Plovers and Dunlins and the same Sanderling.

I could not visit the farm again until after my return from abroad, but on October 8th there were no waders present except Common Snipe, Redshanks and Lapwings, and they were not specially numerous.

As a rule the first records of Jack Snipe are of birds that have been shot, and it may be that passage in late July and early August has been overlooked before the shooting season has begun. Those who have opportunity of watching sewage-farms should look out for the early arrival of this bird.

NOTES FROM STAFFORDSHIRE RESERVOIRS.

BY

A. W. BOYD.

THE following notes are from observations made at the most westerly of the large Staffordshire reservoirs and, in addition, a few made at Gailey Pool—another large reservoir (*cf. British Birds*, Vol. XVII., p. 139; Vol. XVIII., p. 241, and Vol. XIX., p. 233).

Except for a visit in May and another in August, 1926, these records refer to the 1926-27 winter.

Duck as usual were very plentiful and the common species, Mallard (*Anas p. platyrhynchos*), Teal (*A. c. crecca*) and Wigeon (*A. penelope*) were in their normal large numbers; Shovelers (*Spatula clypeata*), though never absent, were not quite so numerous as before.

The following were noted :—

SHELD-DUCK (*Tadorna tadorna*).—Mr. T. Baddeley tells me that he saw one at Gailey Pool on March 14th, 1926.

GADWALL (*Anas strepera*).—Two pairs on May 31st; none in winter; one on March 27th, 1927.

PINTAIL (*Anas a. acuta*).—A drake on December 24th.

POCHARD (*Nyroca f. ferina*).—On May 31st one duck only; twenty to thirty on August 7th; in winter most plentiful at the beginning of February, when there were some scores on the reservoir, and also several hundreds on Gailey Pool.

TUFTED DUCK (*Nyroca fuligula*).—Always numerous; breeds freely; some hundreds in February and also some hundreds then on Gailey Pool.

SCAUP-DUCK (*Nyroca m. marila*).—An adult drake on Gailey Pool on February 6th. Previously, all Scaups I have seen in Staffordshire have been duck or immature drakes.

GOLDEN-EYE (*Bucephala c. clangula*).—Plentiful in December, January and February, but much reduced in number by the end of February.

On January 1st there were from forty to fifty at least of this species on the reservoir and I counted fifteen adult drakes on one stretch of water.

I was fortunate enough to see the drakes display well on three occasions: on January 1st, 9th, and February 6th.

The stimulus of the display was not necessarily the presence of a duck, but evidently rather that of other drakes. Thus, on January 1st, there were ten or eleven adult drakes in a bunch; they were clearly in a state of great excitement and

several repeatedly struck their tails very rapidly with their heads after pointing their bills straight in the air.

On January 9th I saw only two or three drakes displaying—sometimes only extending their “ruffs” and pointing their bills in the air and not invariably continuing with the rapid swing-back of the head. On February 9th five drakes in a group with one brown-headed bird displayed splendidly, each drake in turn striking its tail with the back of its head as they swam quickly round one another. On March 27th there was a certain amount of display but not by drakes in groups. There were probably a dozen adult drakes present and they were much in evidence—flying about a great deal with the ducks, and behaving altogether more wildly than before.

COMMON SCOTER (*Oidemia n. nigra*).—On December 24th two drakes and one on January 1st and 9th.

GOOSANDER (*Mergus m. merganser*).—On December 24th there were five birds; by January 1st there were eleven; on January 9th thirteen, and from thirteen to sixteen on February 6th, three of which were adult drakes; by February 27th these were reduced to six and to four by March 27th. There was one brown-headed bird on Gailey Pool on January 9th.

SMEW (*Mergus albellus*).—Three brown-headed birds on December 27th were the first seen, but on January 1st Mr. G. A. Carver and I counted sixteen—no fewer than six of which were fully adult white drakes; on the same day there was an adult drake on Gailey Pool also.

On January 9th Mr. H. E. Cocksedge, Mr. J. W. Gibb and I watched eleven for some time, among which were four adult drakes.

Three of these old males were swimming together and first one and then another rose high in the water with extended neck and elevated feathers in the crown, and then splashed forward a few feet.

They assumed the attitude given in Millais's *Diving Ducks* in a picture of a captive Smew displaying, but I did not see them throw their heads back (after the manner of a Golden-eye), though from some of Millais's drawings this was evidently part of a display to a duck which he had witnessed.

In this case it was obviously a display of one drake against another. The splashing with their feet as they jerked themselves forward was very considerable and this was also particularly noticed by Millais. The last Smew seen was a brown-headed bird on February 6th.

GREEN SANDPIPER (*Tringa ochropus*).—One on January 1st.

BLACK TERN (*Chlidonias n. niger*).—One on May 31st.

AN INLAND MIGRATION OF GREY GEESE.

BY

R. H. BROWN.

THESE notes deal with a probable migration of the various species of Grey Geese (*Anser* sp.) between the Solway Firth and either Yorkshire or Norfolk or perhaps both counties. As details have been obtained solely from noticing the flocks flying overhead, it is not possible to say which species are involved, if, indeed, all four species are concerned. At the present time the Grey Lag-Goose (*A. anser*) and the Pink-Footed Goose (*A. brachyrhynchus*) are the most abundant species that frequent the Solway. On this migration the flocks keep an average altitude estimated at one thousand to fifteen hundred feet, but occasionally they pass over no more than one hundred feet up. Their flight-formation is mainly like an "inverted V," but the birds in the one arm usually far outnumber those in the other, and this formation is not strictly maintained and may become a long straggling line, whilst one Goose in each flock invariably remains at the head of the wedge or line and seems to act as leader. Most flocks, whether they are travelling by day or night, maintain an intermittent calling, but some pass over in silence.

The flocks in the autumn come to the Solway from a north and north-easterly to easterly direction, so that the marshes at the head of the Firth are visited before those further west. Beyond this fact, it is not possible to give any definite "migration route," as the flocks approach on a more or less broad front. Some come straight over the Scottish hills or Cheviots and reach the marshes without any wandering from their course and give one the impression they have travelled the journey before; many arrive over the Pennines and then make towards the Solway, whilst others get as far south as the Lake District and it is these flocks that appear least sure of their way. When they reach the Lake Mountains some come straight north towards the Solway, but most make wide circular flights as if trying to determine their way, and then apparently sighting the estuary make towards it. The flocks usually arrive from the third week of September onwards (earliest date, six Geese on September 6th, 1924) and some stay until May (latest, May 9th, 1926), but the direction taken by them when leaving the Solway for their breeding-grounds has not yet been noticed.

Throughout the early autumn months, and especially October, there is a constant migration of Grey Geese from

the Solway in a south-easterly direction, presumably towards Yorkshire or Norfolk. Data could be given as regards this passage over Renwick and Wetheral, villages lying south-east of Carlisle, and over Cumdivock, south-west of Carlisle. I was away the October and November of 1921-22-23, but the details for Cumdivock are scarce compared with those from Renwick and Wetheral. Of the upper marshes of the Solway Firth, Rockcliffe Marsh, situated north-west of Carlisle, is most frequented by Geese, and all flocks leaving this marsh and flying to Yorkshire would be more likely to travel over the country south-east of Carlisle, rather than south-west, and my brother informs me that during October and November of 1925 and 1926, many flocks flew over Carlisle heading south-east. However, flocks do pass over Cumdivock and probably further west, and all one can say is that they migrate from the Solway Firth in a south-easterly direction.

The return journey has been seen, usually in February or March, the birds coming from the south-east and making for the Solway Firth. Data, however, are not very abundant.

Some of the flocks may go no further than the north Pennines, especially as feeding-grounds of rough, tussocky grasses, that seem specially favoured by the Grey Lag-Geese, exist there, but so far no Geese have been met on these fells during the winter months, and all the flocks that passed over Renwick, which lies at the base of the Pennines, kept steadily on in a south-easterly direction and never showed any signs of alighting on the hills. Of course, the Geese that travel to Yorkshire or Norfolk are merely going to feeding-grounds, but apparently they remain there the rest of the winter or only make occasional journeys back to the Solway.

THE NOTES OF THE RAVEN.

BY

H. A. GILBERT.

IN the *Practical Hand-Book* the note of the Raven (*Corvus c. corax*) is described as "a frequently uttered, deep 'pruk, pruk,' infallible guide to identity." This, of course, as every one knows is absolutely true; but the Raven has many notes besides the one described above which I would name the "call-note" (*i.e.*, the note they use when flying in company). The different utterances of the Raven are, however, so many and diverse that they could not be included in the condensed form of the *Handbook*.

Now, to me, the finest note of the Raven is the double, resonant one "corronk"—a note ringing like a bell and splendid to hear. What it means I cannot say, but it is generally uttered in my experience when the cock (*i.e.*, the non-sitting bird) greets his mate on his return to the nesting site. I have not heard this note at *every* site but I have heard it at *many* sites, and the best exponent of it is a bird who has his nest in a tree within a few miles of my house. This bird, who is much larger than his mate, is never on the nest sitting (wherefore I say he is the cock) and always makes the note most beautifully whenever he returns to the nest, often diving and acrobating at the same time. It is, I imagine, well known that Ravens vary very much in size and each of a pair can frequently be told apart on that account. If we describe this as a "greeting" note, then there is a rare and curious variant of it. It is a most remarkable "unravenlike" noise and I have rarely heard it—not more than three or four times in my life—a curious, weak, chattering note—"pick, pick, pick, pick, pick"—uttered with crest and "beard" expanded. I heard this note last uttered on April 10th, 1926, when I was standing on top of a cliff with G. H. Lings and his son, and only on two or three occasions before this.

Now these two last notes are uttered by the bird which is returning to a sitting mate (as far as my experience goes), but the sitting bird very often makes a different greeting-note to its returning mate. This note is very like the call of young Ravens when they see food coming—a querulous, high call. J. Walpole Bond tells me (*in litt.*) that he has found several nests by hearing this note from the sitting bird, calling when she is actually on the eggs, and so have I. I have also heard this call made exactly by a bird of the year chasing and pestering one of its parents, evidently asking for food. How-

ever, it may be made by the bird which is not on the nest, for so it happened under a certain big cliff on March 28th, 1926, when Professor J. S. Huxley and I were hidden at the foot of it. The bird making the note was sitting on a crag above the nest, and presently its mate left the nest and flew to it, thereby confounding me because I had just told my companion that only the sitting bird made that call.

Again, Ravens make a curious, harsh, grating cry when Peregrines are pestering and diving at them. Professor Huxley and I heard this very well on the day above mentioned.

They also make a high short note "toc" when they are playing about over a cliff in a gentle steady breeze in sunshine. I presume it means they are feeling "good." I have heard this many times.

A seventh note is one that I have not heard myself, but Mr. Arthur Brook, who has heard it many times, as he tells me, from a photographer's hide, describes it as a low, crooning, loving note when the old birds come to look at small, blind young. It is inaudible at any distance.

Another note is the sharp, harsh, rattling call given out by the male (*i.e.*, the bird on guard) when a neighbouring Raven flies by his nesting territory. This is indescribable and very like the "pruk, pruk," but it is a threatening note of anger and warning, quite unmistakable once it has been heard. Ravens appear only to be jealous of their actual nesting area. They are quite friendly at a feed when out of the nesting area, even during the nesting season. Near the nest, of course, it is war and real war.

Lastly, there are the curious callings and rumblings of courting birds in love with each other. I have seen this many times—crests and beards erected—and I have seen one hold the other's beak with its own, and better still I and my whole family watched the whole performance at close range with the two Ravens near the camel-house at the Zoo last January. It is a pity that the authorities do not give these birds quiet and a chance to nest.

HENRY WHITELY.

1817-1898.

BY

HUGH S. GLADSTONE, M.A., M.B.O.U.

It is so seldom that one is able to make an addition to Messrs. Mullens and Kirke Swann's erudite *Bibliography of British Ornithology* that it seems worth while to record a work—if only projected—on British Birds, by one H. Whitely. In many respects this publication bears comparison with John Hunt's *British Ornithology* (1815-1822) which, it will be remembered, was also never completed and was the work of a self-taught ornithologist, a taxidermist, a dealer in birds' skins, and an engraver.⁽¹⁾

It would appear that Henry Whitely at one time resided at 28, and at another, at 62, Wellington Street, Woolwich. He was a dealer in birds' skins and numbered many famous ornithologists among his patrons, including Dr. P. L. Sclater, H. E. Dresser, and J. E. Harting. His son—Henry Whitely, junior⁽²⁾—went to South America to act as his father's agent and also for Osbert Salvin and Frederick Godman who, from time to time, described his collections in the *Ibis*⁽³⁾. During the course of his business Henry Whitely, senior, sold upwards of 650 specimens of birds to the British Museum, of which at least one—*Porzana hauxwelli*—was new to the collection.⁽⁴⁾ At one time he was employed in Woolwich Arsenal, and was curator of the Museum of the Royal Artillery Institution⁽⁵⁾ of which he prepared the catalogue of the North

(1) *British Birds* (Mag.): Vol. XI., pp. 125-137 and 148-155.

(2) Henry Whitely, junior (b. 18th June 1844), has been described as a most enterprising traveller and collector in Japan and in various countries of South America. He made his first expedition to Japan in 1864 and, after returning to England, went to Western Peru in 1867 and later to Southern Peru and British Guiana, where he made several ornithological discoveries. He also did a considerable amount of geographical work, and in 1884 published an account of his exploration of the mountains Roraima and Kukenam. (*Proceedings of the Geographical Society*, 1884: Vol. VI., pp. 452-463.) He died in British Guiana, 11th July 1892 (*Ibis*: 1893, pp. 287-288).

(3) *Ibis*: 1867, pp. 193-211; 1885, pp. 195-219, 291-306, 418-439; 1886, pp. 57-78, 168-181, 499-510.

(4) *The History of the Collections contained in the Natural History Departments of the British Museum*: Vol. II., 1906, p. 510.

(5) The Secretary R.A.I. informs me (*in litt.* 28.i.25) that this collection was dispersed during 1911-12.

American Birds and Eggs⁽¹⁾. The only other contributions made to ornithological literature by Henry Whitely, senior—other than the publication which forms the basis of this paper—are a note in the *Zoologist* on a “Hoopoe killed on Plumstead Common”⁽²⁾; a letter in the *Ibis* on the swimming of Skuas⁽³⁾; and a covering letter to a communication from his son in the same journal⁽⁴⁾. On 30th March, 1898, he died at Woolwich, aged 81 years⁽⁵⁾.

It was in 1846 that Henry Whitely, senior, commenced the publication—in parts—of a small and now exceedingly scarce book on British Birds. Owing, however, to the interference of his business, which took up most of the author's time, only three parts were published⁽⁶⁾ and it is highly improbable that many copies were printed. The list of subscribers, in part II., numbers but forty-four, and a similar list in part III. only totals fifty-one. The work is very seldom quoted in any second-hand bookseller's catalogue, and it may be noted that the British Museum Library does not possess a copy. I have part I., and the only owner—so far as I know—of a complete set of the three parts is Mr. J. E. Harting, who has not only most kindly lent me his copy for inspection, but has also given me a good deal of information about the author. The plates are said to have been drawn and coloured by Whitely's wife, and reveal (if it may so be surmised) the influence of the illustrations to Sir William Jardine's *Naturalist's Library* (1838-1843) in that the birds themselves are coloured and the backgrounds scenic but in black and white. The colouring of the plates in parts II. and III. appears to be more crudely executed than in part I.

As regards the actual work itself: an advertisement sheet (which is fortunately preserved in my copy of part I.) gives some interesting details:—A Natural History of British Birds—in parts—was projected; each part to contain seven coloured plates of birds and one coloured plate of their eggs;

(¹) *Catalogue [of] North American Birds and Eggs, arranged in cabinets, in the Museum [of the] Royal Artillery Institution, [Woolwich.] by [Mr. H. Whitely,] curator of the Museum. [Woolwich:] printed at the Royal Artillery Institution, [1865. 1 Vol. 8vo. pp. [1], 1-23. (Copies of this catalogue are met with but rarely.)*

(²) *Zoologist*: 1861, p. 7647.

(³) *Ibis*: 1866, p. 127.

(⁴) *Op. cit.*: 1884, pp. 356-8.

(⁵) Registrar of Births and Deaths, Woolwich.

(⁶) Henry Whitely: *in litt.* to J. E. Harting: 25.iii.1894.

price 1s. 6d. neatly bound in cloth ; first part now [1846] ready ; second part to be ready in June and another part, to appear as part III., to be ready in December. As the number of copies to be printed was to be limited, subscribers were invited to apply to G. Whitely. The advertisement goes on to point out that G. M. Whitely was a "steel and copper-plate engraver, bookseller and printer" at 62 Wellington Street, Woolwich. H. Whitely describes himself as a "Bird and Animal preserver, dealer in Foreign and British Bird skins, Insects, Shells, etc.," and he adds "Gentlemen wishing to obtain a thorough knowledge of British Birds and their Eggs, can inspect a large collection of Skins and Eggs at H. Whitely's, 62 Wellington Street, Woolwich."

It only remains to add that the letterpress, though unpretentious, contains some references as regards distribution which are of interest nowadays. The book is certainly remarkable as the work of a self-taught man who claims that :—"The object in the publication of this small volume, is not gain, but with a view to induce individuals of the same standing in society as myself (that of an Artisan) to bestow a small portion of that time, which is spent by so many in the ale-house, upon the study of natural history, not merely by reading works of that description, but by repairing to the woods and fields, where, under the clear vault of heaven, they will find nature in all her glory."⁽¹⁾ Similar noble sentiments are expressed in the introductions to each of the three parts and, in taking leave of this high-minded Artisan of eighty years ago, I trust it will not nowadays be regarded as provocative if I conclude this very incomplete biography of Henry Whitely with the words *si sic omnes*.
Collation :—

[Part I.] *Natural History of British Tits, by H. Whitely.* [cut] *Nest of the Long tailed Tit.* / Published by G. M. Whitely, Wellington St., Woolwich. / 1846. pp. [iii]—iv, Introduction : pp. [1]—[22] Letterpress to plates 1—7. Bearded Tit, Long tailed Tit, Great Tit, Blue Tit, Marsh Tit, Cole Tit, Crested Tit, and plate 8 of eggs of these species except Crested Tit : 1 p. [unnumbered] advertising the work. The imprint on p. [22] states that it was printed by *James Black, printer, Powis Street, Woolwich.* (The copy which I possess of this part appears to be in the original green cloth covers and measures $7 \times 4\frac{1}{4}$ ins. On the front of the cover is pasted a green label *British Birds, Part I. TITS.*)

(¹) H. Whitely : *British Tits* : 1846 : [part I.] p. [iii].

Part II. *British Birds*,/by/H. Whitely./Part 2nd/Finches./[cut] nest of the chaffinch./1847. pp. [iii]–vii, Introduction: Subscribers [List of 44] pp. [1]–25 Letterpress to plates 9–15. Hawfinch, Greenfinch, Goldfinch, Siskin, Chaffinch, Mountain Finch, Bullfinch, and plate 16 of the eggs of these species: [no imprint as regards printer].

Part III. *British Birds*,/by/H. Whitely./Part III./Finches./Woolwich:/Published by G. M. Whitely,/62, Wellington Street,/ 1848. pp. [iii]–v, Introduction: Subscribers [list of 51]. pp. [1]–21. Letterpress to plates 17–23. House Sparrow, Tree Sparrow, Linnet, Twite, Redpole, Mealy Redpole, Bunting, and plate 24 of the eggs of these species except Mealy Redpole: [no imprint as regards printer].

NOTES

EARLY YELLOW WAGTAILS IN KINCARDINESHIRE.

ON March 23rd and 24th, 1927, while fishing on the Dee near Banchory, I saw Yellow Wagtails (*Motacilla f. rayi*) on the bank, which is mostly cultivated and grass in that district. Although I did not see more than two birds at once I saw them in different places and think there were two pairs.

H. LEYBORNE POPHAM.

GREAT GREY SHRIKE IN KENT IN SPRING.

ON April 6th, 1927, my son, W. H. Hale, and I saw a Great Grey Shrike (*Lanius e. excubitor*) at Hothfield. It is well known that as an autumn and winter visitor this bird occurs almost every year in Kent, but according to Ticehurst (*B. of Kent*, p. 115), only three have been recorded in spring or summer. I take this opportunity of recording another bird shot at Hollingbourne on February 19th, 1906.

JAMES R. HALE.

EARLY SPOTTED FLYCATCHER IN PERTHSHIRE.

ON March 28th, 1927, I saw a Spotted Flycatcher (*Muscicapa s. striata*) near Dunning in Perthshire, about 1,000 feet above sea-level.

I may add that it was on a telegraph wire immediately above me for several minutes, and to confirm the identification caught two flies and returned, showing the characteristic flight.

A. H. R. WILSON.

EARLY BLACKCAP IN GLOUCESTERSHIRE.

A BLACKCAP (*Sylvia atricapilla*) appeared in my garden at Uley, Gloucestershire, in the beginning of March, 1927. I first saw it on the 3rd and heard its subdued song. It stayed about until the 17th, another fine day, when it sang more fully and again on the 19th.

A. F. R. WOLLASTON.

HOMING INSTINCT IN ROBINS.

FOLLOWING my experiments in homing with Hedge-Sparrows (Vol. XIX., p. 24), I have always hoped to investigate the same with Robins (*Erithacus rubecula*).

Unfortunately, I have never had a Robin which was sure to visit my traps more than once a day ; I did, however, find

one (ringed F.1030) which I took a distance of five miles by speedometer on a fairly straight road on December 20th, 1926, at about 2.30 p.m., and recaught the next morning at about 9.30 a.m. where usually taken. I think this bird was home by nightfall on the 20th.

Another Robin (ringed F.1034) became a fairly frequent trap visitor. On November 16th, 1926, I caught it and tied some red wool on its tarsus, releasing it $1\frac{1}{2}$ miles away, with a rise 300 feet high intervening, at about 11 a.m. I am of opinion that I saw this bird with the naked eye at home about an hour later, and established its return by telescope at 2.30 p.m.

A. H. R. WILSON.

HEN-HARRIER AND GREAT GREY SHRIKE IN SUSSEX.

ON February 19th, 1927, we observed a Hen-Harrier (*Circus c. cyaneus*) near Midhurst. On February 21st, 1927, we watched for some time a Great Grey Shrike (*Lanius c. excubitor*), probably a male, on a common near Petworth. On going over the same ground on March 4th, we saw no sign of him, but on April 11th he was seen again.

STANLEY MORRIS.

RAYMOND CARLYON-BRITTON.

BEWICK'S SWANS AND GOLDEN-EYES IN NORTH DERBYSHIRE.

PERHAPS the following notes on birds recently observed in the Peak District of North Derbyshire may be of interest.

On March 7th I saw four Bewick's Swans (*Cygnus b. bewickii*) on Coombs Reservoir, near Buxton. Two were in full plumage while the others had smoky-grey on the necks. The next day they were gone. Swans are not common in these parts, though I reported seventeen seen on March 4th, 1925 (Vol. XVIII., p. 317).

At the same time there were two Golden-eyes (*Bucephala c. clangula*) on the water. They remained a few days. They were both ducks or young adults, the dark grey below the neck and on the side of the body, the whitish collar, and the expert diving near the shore convinced me as to their identity after seeing them on several occasions.

This duck is not common in north Derbyshire; apparently the only other record is from Baslow, where one was shot (? date), but no doubt it has been overlooked.

WILLIAM SHIPTON.

UNUSUAL SPECIMEN OF WHITE-FRONTED GOOSE FROM MONMOUTHSHIRE.

RECENTLY, Mr. R. C. Banks kindly gave me information about a White-fronted Goose shot on December 16th, 1921, at the Corporation Yns-y-fro Reservoir, about two miles from Newport. This bird is preserved in the Newport Museum and was considered to be a specimen of the Lesser White-fronted Goose (*Anser erythropus*), but as the careful details sent by Mr. Banks did not altogether agree with that species, and as only one British-taken specimen had been fully authenticated, Mr. Banks kindly arranged with Mr. Gunn, the curator of the Newport Museum, where material was insufficient for a full comparison, to send the bird to me for examination.

As the bird proved to be an unusual specimen, the following details concerning it may be acceptable. I consider that it is a very small example of the White-fronted Goose (*Anser albifrons*) and not a Lesser White-fronted (*A. erythropus*), and this opinion was confirmed by several ornithologists to whom I showed the bird while it was at the Natural History Museum for examination and comparison.

The chief characters which rule it out as being of the species *erythropus* are that the white patch on the forehead is restricted as in *albifrons* and does not extend backwards over the middle of the forehead towards the crown as it does in *erythropus*, and that the "teeth" in the upper mandible are quite exposed to view as in *albifrons*, whereas in *erythropus* they are concealed when viewed from the side.

The following are comparative details :—

<i>Newport Specimen</i> ♂ December, 1921 (stuffed).		<i>Anser ALBIFRONS.</i> <i>Anser ERYTHROPUS.</i>	
Wing : 400 mm.		392-442 (A. C. Meinertzhagen, <i>Pract. Handbook</i> , II., p. 238). 375 (smallest given by Alpheraky, <i>Geese of Europe</i>).	367-388 (A. C. Meinertzhagen, p. 241). 395 (largest, Alpheraky).
Bill from feathers : 40 mm.		43-52 (A.C.M.) 40 (smallest, Alpheraky).	28-35 (A.C.M.). 37.5 (largest, Alpheraky).
Number of teeth in upper mandible : 25		Usually 28, rarely 26 (Alpheraky), about 28 (A.C.M.).	22-23 (Alpheraky). 20-22 (A.C.M.).
Teeth : exposed to side view.		Exposed to side view.	Concealed from side view.

Newport Specimen. . . *Anser ALBIFRONS.* *Anser ERYTHROPUS.*

Forehead: shape and extent of white as in <i>albifrons</i> .	White restricted to forepart of forehead (see <i>Pract. Handbook</i> , Vol. II., pl. 5).	White extending backwards on centre of forehead to or beyond eyes.
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Folded wings project about 20 mm. beyond tip of tail.	Folded wings usually fall short of tip of tail but occasionally project slightly.	Folded wings usually project beyond tip of tail.
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Head, neck and upper-parts: colour as in <i>albifrons</i> .	Usually paler brown than in <i>erythropus</i> .	Usually darker and richer colour than in <i>albifrons</i> .
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It should be mentioned that in the Newport specimen the extreme base of the bill has been inadvertently painted white, and this merging with the white feathers of the forehead has made the bill look shorter than it really is.

H. F. WITHERBY.

GARGANEYS IN CHESHIRE.

ON March 28th, 1927, Mr. R. M. Garnett and I visited the meadows flooded by the River Mersey at Sale in the north of Cheshire.

There we saw a drake Garganey (*Anas querquedula*) with about sixteen Common Teal (*Anas c. crecca*), and half a mile away a drake and a duck Garganey rose from another flooded meadow.

On March 31st we found that the floods had subsided and that the Common Teal had gone, but there was a bunch of Garganeys—three drakes and two ducks—feeding at the edge of a stretch of water a few inches deep.

Since 1922 I have seen Garganeys in five localities in Cheshire and Staffordshire; on four occasions they were first seen between March 26th and 31st; this seems to point to a very regular period for migration.

A. W. BOYD.

Having heard from Mr. Boyd about the Garganeys I decided before seeking them in the flooded meadows to look at a large sheet of water some six miles to the south-west of the meadows. There, on April 6th, I found a pair close inshore, and later, when they had followed the Teal with which they were swimming to more open water, I saw that there was a second pair. On the following day, Mr. T. Hadfield and I watched five birds—three drakes and two ducks,

corresponding with the numbers seen by Mr. Boyd, and they remained on the mere until at least the 16th. Probably these were the same birds seen by Mr. Boyd and Mr. Garnett before the floods subsided. I could not be sure that they were two mated couples and an odd drake, for several times all three drakes paid attention to one duck, but whether always the same duck is uncertain. They swam after and round the duck, throwing up their heads and calling every few seconds, but the display was not vigorous; when a duck rose all three drakes followed her every turn and twist, the other duck, meanwhile, feeding complacently with the Teal. But after these excursions one of the drakes returned and swam alongside the second duck.

My personal records of Garganeys in western counties are a little later than Mr. Boyd's, though I cannot say when the birds first arrived. They are :—Anglesey, April 15th, 1905; Cheshire, April 9th, 1910, and April 1st, 1922. The 1922 birds remained for several days, but not so long as the present party. A drake was shot in Anglesey in August or September, 1917, but I have no note of the bird in Cheshire in autumn.

T. A. COWARD.

LATE NESTING OF LAPWING.

AT Dalwhinnie (Inverness-shire) on September 1st, 1926, with Colonel Pelham-Burn, I handled a fledgling Lapwing (*Vanellus vanellus*) which was still covered with down, and in our opinion ten days old. I had ringed this bird a few days previously, and could state that it was the only member of the brood.

A. H. R. WILSON.

BROWN-COLOURED ROOK IN CORNWALL.—Mr. E. W. M. Magor informs us of a brown-coloured Rook (*Corvus f. frugilegus*) that frequents the neighbourhood of St. Tudy. He describes it as being light chestnut on the upper surface, with a darker head, and bay coloured below.

LETTER.

THE CUCKOO'S CALL.

To the Editors of BRITISH BIRDS.

SIRS,—May I be allowed to ask, through the medium of *British Birds*, how other listeners hear the Cuckoo's call *at close quarters*? For a good many years I have heard a soft "Ch" in the middle, and a distinct "S" at the end—like "Touch (Th)is." A. V. STONE.

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